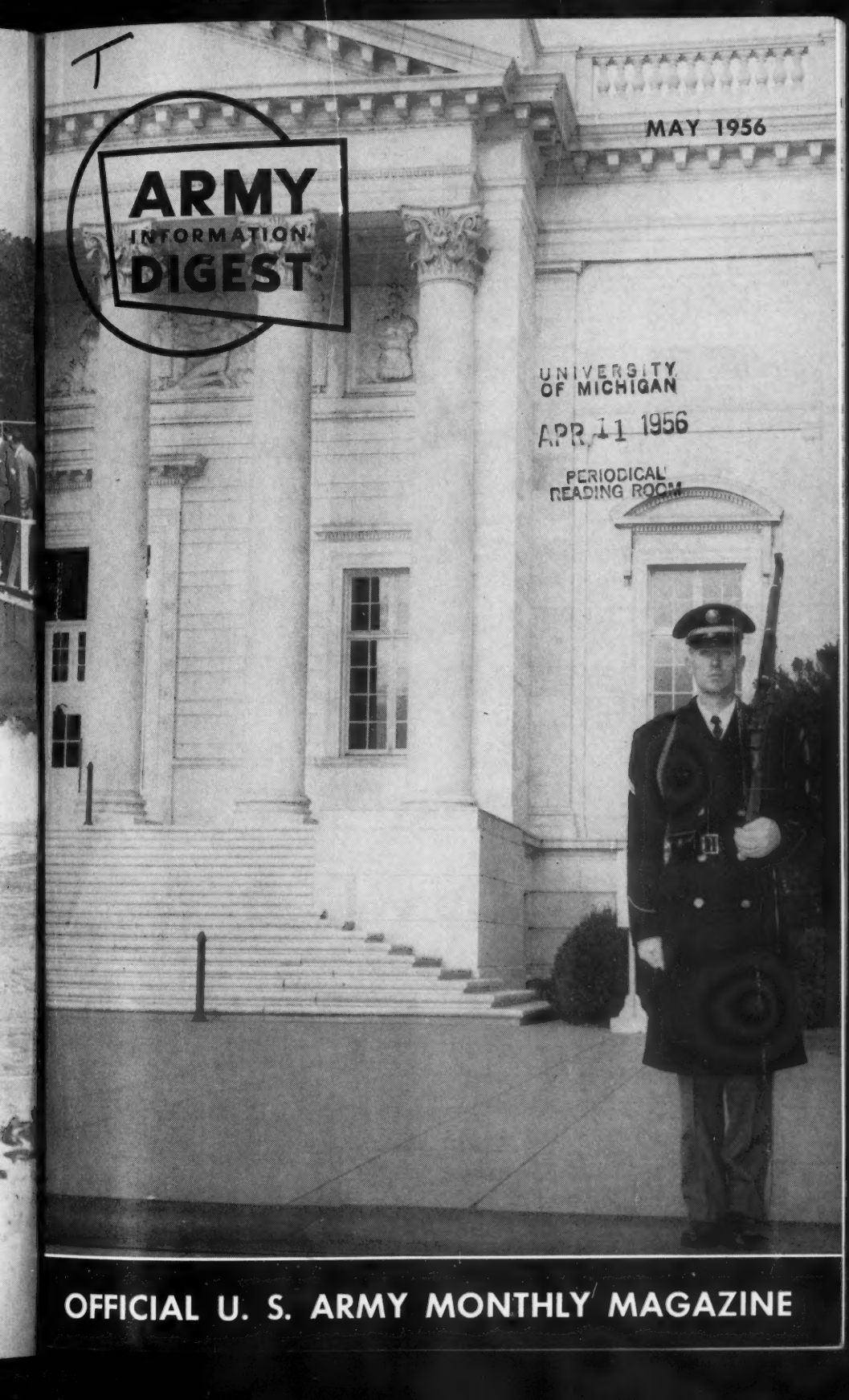
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ARMY INFORMATION DIGEST

OFFICIAL MONTHLY MAGAZINE of the DEPARTMENT OF THE ARMY

The mission of ARMY INFORMATION DIGEST is to keep personnel of the Army aware of trends and developments of professional concern.

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EVERY DAY is Memorial Day at the Tomb of the Unknown Soldier where the Nation's homage to its honored war dead continues as an unceasing rite. The front cover scene is enacted 24-hours a day as honor guards of the 3d Infantry Regiment maintain their vigil. Other activities of the Army's oldest active regiment are described in "The Army's 'Old Guard.'"

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MAY 1956

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Number 5

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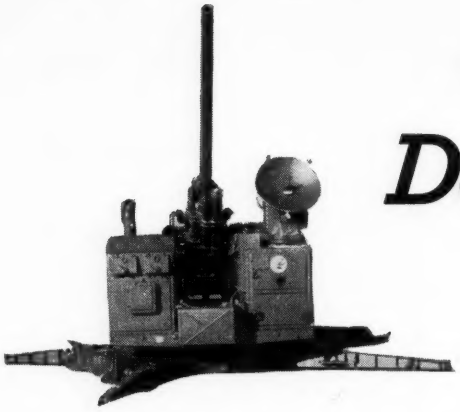

CONARC's R
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Major Gene alph

THE UNITED STATES ARMY is a combination of a number of elements—weapons, equipment and men. In light of the vast mechanical advances made in recent years, the importance of human beings is sometimes neglected. In the constant striving to create improved weapons and equipment for a modern defense force, the vital importance of the men who ultimately use these means must never be forgotten.

"As good as the men who use them." In essence, this spells out the objective of the Development and Test program at Headquarters, Continental Army Command, Fort Monroe, Virginia. Here requirements for new weapons are established, and Military Characteristics are written and submitted to Department of Army for approval. User guidance is furnished the Technical Services who develop the materiel. The new item then goes to one of CONARC's six testing boards where, under supervision of Development and Test Section, its suitability is determined.

MAJOR GENERAL RALPH M. OSBORNE is Assistant Chief of Staff for Development and Test, Headquarters, Continental Army Command, Fort Monroe, Va.

The Chief of Research and Development, Department of the Army, supervises the overall army research and development program in which CONARC has a large responsibility.

IT IS a known fact that there exists a substantial disparity in manpower between the United States and the forces of the Communist bloc which pose a threat to our national security. This dictates that the Army devote considerable talent and energy to the task of making our forces the most advanced scientifically and technically of any army in the world. The fact that the Soviets are working along similar lines gives added impetus to this task.

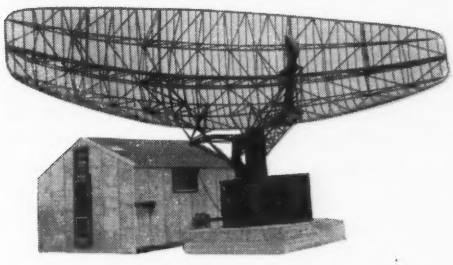
This, then, is the all-important job for which CONARC's Development and Test organization shares a major responsibility.

By Army regulations, the Commanding General, CONARC, is responsible to the Chief of Staff for the following development and test functions:

1. "Recommending Military Characteristics of new Army weapons, equipment and materiel for units normally a part of the field army; reviewing Military Characteristics for ma-

Role in and Test

alph M. Osborne



teriel not normally a part of the field army but which may be used by the Army in the field. (The term "Army in the field" is construed to include all types of military individuals and units of the Army Field Establishment utilized in, or intended for utilization in, a theater of operations.)

2. "Testing weapons, equipment and materiel used by units normally a part of the field army; and participating in tests of materiel used in common with other Army agencies, the United Kingdom and Canada.

3. "Establishing such boards and agencies as are necessary to insure the continued development and testing of new materiel."

These responsibilities are performed by the Development and Test (D&T) Section, CONARC and CONARC Boards 1 through 6 and the Arctic Test Branch. Specifically, D&T supervises the implementation of those missions assigned to the Commanding General, CONARC.

This includes evaluating proposals for new materiel and advising other staff sections on their feasibility; preparing Military Characteristics for approved requirements for units normally a part of the field army; and reviewing Military Characteristics for materiel of units not normally a part of the field army but which may be used by the Army in the field. All Military Characteristics and recommendations are submitted to the Deputy Commanding General, CONARC for his approval.

In executing its testing responsibilities, D&T supervises the testing and evaluates the results of equipment for units normally a part of the field army. It also participates in tests of equipment used in common with other Army agencies, the United Kingdom and Canada, as appropriate.

D&T—a General Staff Section of Headquarters, CONARC—is comprised of six divisions, grouped according to their field of responsibility. These Divisions are Artillery, Rockets and Atomic (Dev–1); Vehicles and Armor (Dev–2); Infantry Weapons and Individual Equipment (Dev–3); Antiaircraft Artillery and Guided Missiles (Dev–4); Communications and Electronics (Dev–5); and Army Aviation and Airborne (Dev–6).

DEV–1 responsibility extends to field artillery weapons, ammunition, fire control, mounts and related accessories and equipment; meteorological equipment; atomic and radiological warfare; and main-

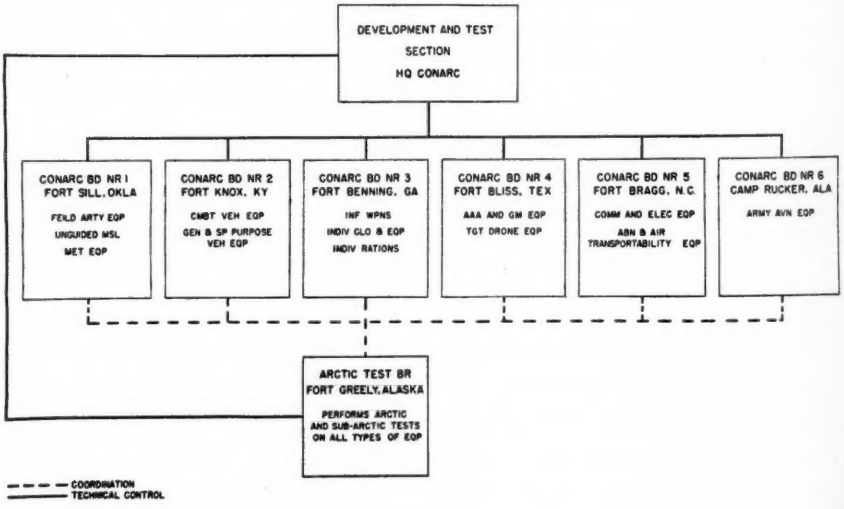
tenance equipment for these items. Typical of the projects in which Dev–1 has participated is Honest John, a surface-to-surface free rocket. This weapon was developed by the Ordnance Corps for use by the Field Artillery to furnish an all-weather atomic capability to front line combat troops. It is capable of delivering various types of warheads up to 15 miles.

Among other weapons projects in which Dev–1 has participated are the 105-mm. Self-Propelled Howitzer, the M52 designed to be a light artillery workhorse to furnish direct (close) support to rapidly moving armored and infantry formations; the 155-mm. Howitzer, Self-Propelled, M44, a highly mobile SP Howitzer designed to furnish general and reinforcing fires to armored combat formations; a heavy artillery vehicle which employs the chassis of a medium tank and mounts either a 155-mm. "Long Tom" Gun or an 8-inch Howitzer; and the 280-mm. atomic cannon, a long-range very heavy conventional or atomic artillery piece.

ARMORED vehicles and associated weapons, ammunition, fire control and accessories; automotive equipment, engineer, medical and dental equipment for the field army —and maintenance equipment for these items—are the responsibility of Dev–2. One of the most recent projects in which this Division participated is the M59 Armored Infantry Carrier.

After World War II, the Ordnance Corps went to work on a full-tracked, armored carrier having overhead cover. As a result, the M75 was developed. Production costs, however, were extremely high. Dev–2 alleviated this situation by requesting development of

ORGANIZATION OF CONARC, DEVELOPMENT AND TEST FIELD AGENCIES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TECHNICAL CONTROL

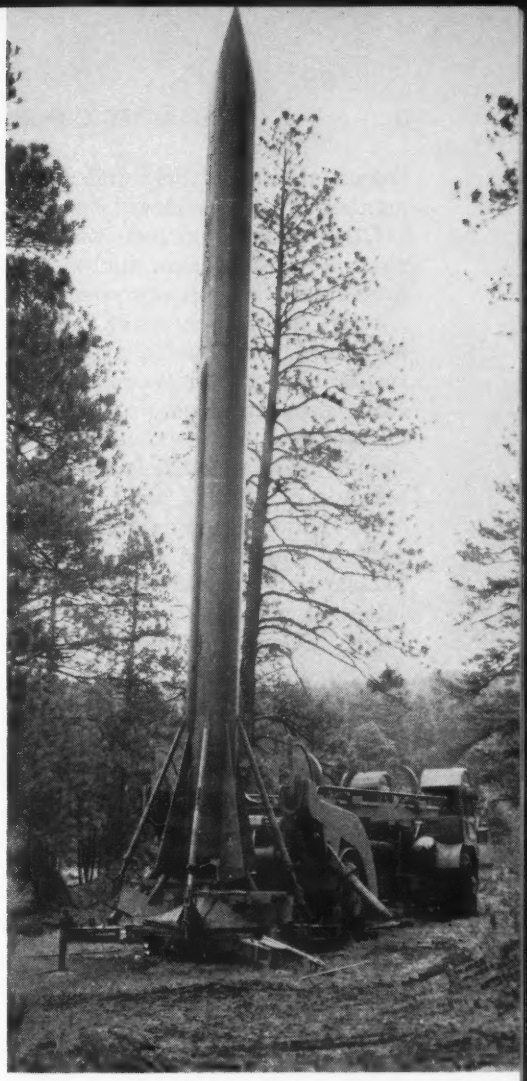
the entirely new M59, which retains the best features of the M75 and uses standard 2½-ton truck engines and transmissions. This design also facilitates production, reducing the cost by approximately 40 percent. Other vehicles recommended by this Division include a family of tanks, new improved ¼-ton jeeps, and amphibious cargo carriers.

DEV–3 responsibility includes infantry weapons and individual equipment, chemical and biological warfare equipment, and related maintenance equipment. Perhaps the most widely-publicized project of this Division is the new lightweight rifle system. This project has been directed toward producing a single lightweight rifle with heavy barrel variant which is capable of replacing the M1 Garand rifle, the BAR, the carbine, and the submachine gun.

Two models are presently under consideration—the T44, a U. S. Army Ordnance design, and the T48, designed by the Fabrique Nationale of Belgium. These weapons fire the NATO standard .30 caliber ammunition.

Dev–3 has supervised troop tests of this lightweight rifle system, including arctic, tropic and temperate phases, and service testing is currently under way. Other items which have been projects of this Division include the 106-mm. M40 rifle with mount or BAT (Battalion Antitank Weapon), a standard armored vest, and new load-carrying equipment for the soldier.

THE NIKE guided missile antiaircraft weapon was the primary responsibility of Dev–4. This agency's field of interest also extends



A Corporal Type II missile is emplaced on its launcher as part of CONARC supervised field tests.

to antiaircraft weapons, fire control, mounts and related accessories and equipment, guided missiles systems, target drones, and maintenance equipment.

Reportedly the world's best antiaircraft weapon, the *Nike* is now used in many defense locations around the largest cities in the United States. The *Corporal* surface-to-surface guided missile, designed to extend and supplement

the capabilities of field artillery, is another project of Dev–4.

Other projects include the *Skysweeper,* a radar-controlled mobile antiaircraft weapon equipped with a rapid fire 75-mm. gun, and the M33, a new fire control system for the 90-mm. and 120-mm. antiaircraft guns employing a complex electronic device for detecting and tracking aircraft by radar and providing gun pointing data.

An interesting sidelight to the Army's Antiaircraft and Guided Missile Program has been the evolution of a broad scope of teamwork among engineers, scientists and the military. At many contractors' plants and at Army installations, Army personnel and civilians work side-by-side to develop these weapons. Besides providing technical training for thousands of Army personnel from all branches of the service, the program is making a sizable contribution to development and test effort.

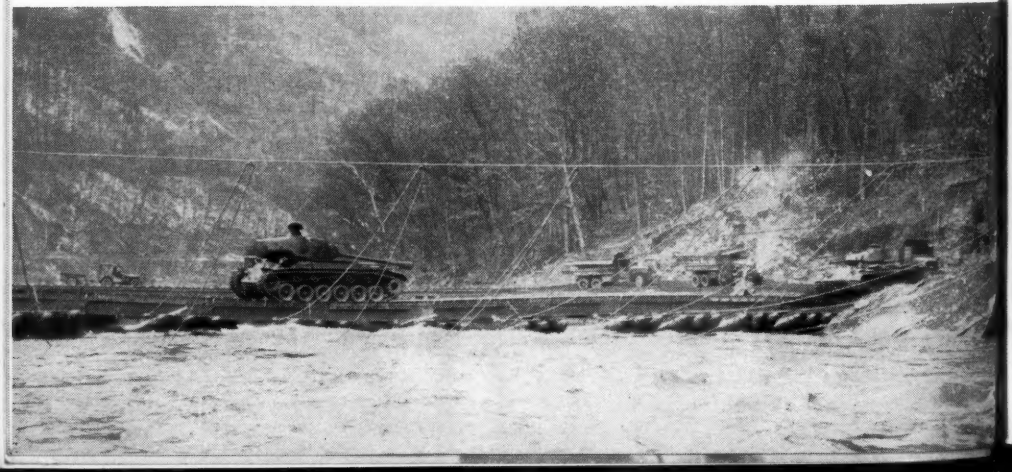
THE Army's increasing use of electronic devices and the new Field Army concept based upon flexible, mobile, dispersed forces under conditions of two-sided atomic warfare has greatly increased the activities of Dev–5 in recent years.

This Division's responsibility is in the field of communications and electronic equipment, including the transmission and reception of voice, code, teletype, facsimile and television by both wire and radio; cryptography; radar; infrared; searchlights; meteorology; photography; mine detection; electric power supplies of all types; and tools, test equipment and electronic jammers. The Division also monitors all psychological warfare and Special Forces developments.

In the communications field, Dev–5's work stems from the fact that the single-axis, echelon-to-echelon communications system has been outmoded. In its place is the grid-type communications system, which depends on the efficiency and traffic handling capabilities of multichannel radio relay equipment.

New radio sets are being developed by the Signal Corps to provide more flexible and reliable communications for the combat arms, in

Tanks and vehicular equipment test the load carrying capabilities of a Class 60 floating bridge at Board No. 2, Fort Knox, Ky.



many cases down to squad level. Miniature components and transistors are used to the greatest extent to reduce weight and battery drain and to increase reliability.

Dev–5 is also cooperating with the Signal Corps in developing a system which will detect and locate military targets. Radar, infra-red and all types of technical sensory devices will be examined for possible incorporation into the system. Other projects include improved radar systems to locate hostile mortars, artillery and guided missiles; to detect enemy aircraft, and to assist in registration of friendly artillery.

Special equipment also is being developed to detect and jam enemy communications, radar and VT fuses. Advantage is taken of every opportunity to increase the efficiency, range, reliability and flexibility of equipment.

ARMY AIRCRAFT and special airborne and air support equipment, included in the development and test functions of Dev–6, are probably the most rapidly expanding fields in the Army today.

This Division is participating in development of a number of new aircraft including the Bell H–13–H series, the Army standard type two-place reconnaissance helicopter; the XH–40, an improved utility helicopter designed to replace the present H–19; the H–34 helicopter; the H–21C helicopter which is currently being used by some Army Transport Helicopter Companies; the H–37 helicopter, produced by the Army to fulfill the three-ton payload requirement; and the H–16B, a tandem rotor helicopter designed to lift five tons of payload.

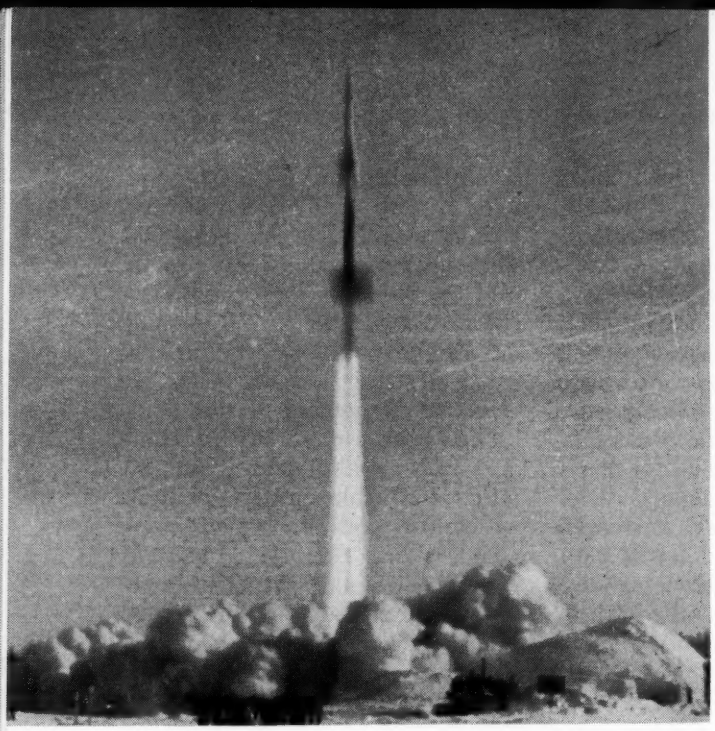
Dev–6 plays an important part in preparing Army Military Characteristics for U. S. Air Force assault and troop transport aircraft used by the Army airborne forces. The C–123 and the C–130, Assault and Troop Transport Aircraft, respectively, are two of the most recent developments in this field.

The C–123 aircraft, with a combat radius capability of about 700 miles, is capable of delivering 60 parachutists and also heavy equipment. It has short-field landing characteristics and ability to operate from unprepared landing areas.

The C–130 has a combat radius capability of 1,000 nautical miles, can deliver 64 parachutists, or transport up to 92 troops or 74 litters. This aircraft will greatly enhance the Army's airborne capability in range, speed and payload.

A third new aircraft designed for Army use is the C–133 Heavy Cargo Transport, with a combat radius of 1500 to 1800 nautical miles. This plane, capable of carrying 200 to 300 troops, will provide a capability for longer range operations, making possible the transport of heavier items (including the light tank) for a range of 2,000 miles. Other equipment includes an improved aerial delivery system, personnel parachutes and allied equipment, and airborne engineer equipment.

IN ADDITION to the Headquarters Divisions, D&T maintains liaison officers at arsenals and with civilian contractors and laboratories. It also maintains seven field testing agencies—CONARC Boards Numbers 1, 2, 3, 4, 5 and 6, and the Arctic Test Branch, at Forts Sill, Knox, Benning, Bliss, Bragg, Rucker



NIKE I missile fired under Arctic conditions at the Arctic Test Branch creates a cloud of steam as booster blast melts the snow.

and Greely, respectively. (*See chart.*) The work of each corresponds to the comparable divisions within the D&T Section.

The development process is most complicated, and dependent upon the work of many people and many separate agencies. To illustrate how this system works, a hypothetical item—Devtest—is used. Devtest might originate within the Combat Developments Section at Headquarters CONARC when a requirement is established for the item. It then goes to the D&T Section where its Military Characteristics are prepared and staffed.

The Commanding General, CONARC approves the Military Characteristics and forwards them to the Pentagon for General Staff processing. The Army Technical Service concerned then prepares the technical characteristics of the item and refers it to the Department of the Army Technical Committee for action.

Upon approval, it goes to the Technical Service or private contractors, as appropriate, for design studies. A civilian contractor or the Technical Service produces a mock-up and a prototype, and the Technical Service concerned then conducts engineering tests.

Upon completion, Devtest is sent to a CONARC Board for a service test which is supervised by the D&T Section, CONARC. Test results are sent to the Department of the Army, whereupon contracts are let for production. Finally, the civilian contractor begins procurement and production.

Actually this cycle represents a process of from four to eight years, depending on the type equipment developed. From the time CONARC's Combat Developments Section establishes the requirement until the civilian contractor produces the mock-up or prototype, representatives of D&T Section, Chief of Army Research and De-

velopment, civilian contractors and Technical Services exchange ideas and reach agreement at all stages of development.

Once the civilian contractor begins production on the prototypes and until actual production begins, coordination is effected with Headquarters CONARC, Schools, CONARC Boards, and with Canada and the United Kingdom. Canadian and British liaison officers at CONARC Headquarters aid in effecting this coordination.

DEVELOPMENT and test work at CONARC is a vital, continuing process. Its progress aids materially in achieving the added capabilities of enlarged mobility and striking power, and in adapting techniques and scientific know-how needed to increase the Army's fighting potential. This goal, and the goal of the Army, is to maintain technological superiority over any potential enemy in every line of military endeavor within the Army's sphere of responsibility.

As the techniques of war increase in scope and complexity, the development and test program similarly will reflect such changes. Nevertheless, the fact remains that wars are still won by men fighting on the ground. This means that every piece of equipment—every weapon, vehicle and aircraft—must be developed to fit the ultimate needs of the individuals who will use them. On the basis of their skill and ability to use the resulting product depends the success or failure of the Army in battle.

Developments in the News

AN "airborne" crane, capable of lifting more than its own weight, has been developed by the Corps of Engineers' Research and Development Laboratories, Fort Belvoir, Virginia, and the American Steel Dredge Division of American Hoist and Derrick Co. The unit, weighing 14,700 pounds, is designed to lift nine tons at a 10-foot radius with outriggers. Without outriggers, it has a capacity of seven tons at the same radius. The machine is also equipped with shovel, dragline, and clamshell earth moving attachments of half-cubic yard size. Its 22'6"x8'2"x6'9" dimensions are within the critical transport limitations imposed by cargo aircraft.

A CONTRACT for construction of a new type self-propelled, deck loaded cargo barge was recently awarded to National Steel and Shipbuilding Corporation of San Diego, California, following design work by the Army Transportation Corps and the Department of the Navy. The vessel, known as the Beach Discharge Lighter, will receive vehicular cargo without recourse to cargo handling equipment, and deliver loaded vehicles directly to the beach. It also will handle other bulk cargo from conventional ocean-going ships. The new cargo barge will be approximately 330x65 feet, carrying a net payload of approximately 600 tons of vehicular cargo or 1,000 tons of general cargo. It will have a loaded speed of 12 knots and a cruising range of approximately 4,800 miles.

FIRE retardant paints which slow down the rate of burning have been developed by the Corps of Engineers' Research and Development Laboratories, Fort Belvoir, Virginia. Containing certain pigments and oils which form a spongy insulating layer when subjected to heat, the paint also provides all the esthetic and protective properties of good interior and exterior finishes. Use of fire retardant paints does not stop fires, but it does aid materially in minimizing damage and loss of life. The new development is expected to be of major value in the civil defense program.

Plans for long-range active duty are advanced by the

'CAREER CA

Captain Max L. Marshall

APPROXIMATELY 88,000 Reserve officers are on active duty in the Army today. Some are newly commissioned young men serving their obligated tours of duty as required by law; a segment consists of young officers with three or more years of service who intend to make the Army their life's work; a small number consists of specialists, doctors, dentists and others serving for short specified periods of time. But a substantial percentage of the overall total is made up of officers with many years of voluntary active service—frequently dating back to World War II. These men have come to be considered by the Army and their fellow officers as "career reserve officers."

To this group, and particularly to the career reservist, the Nation and the Army owe much. Many entered the Service as citizen-soldiers, rallied around the nucleus of armed strength carefully nurtured by the Regular Army during its peace-emaciated years, and went on with their brothers-in-arms to provide the outstanding leadership which inspired the American soldier to victory in World War II.

After hostilities ended many stayed on to guard far-flung, important, and often lonely outposts as the Army, drastically reduced, struggled to perform its postwar missions. Some were again on hand, and many were recalled five years later, when the Korean outbreak occurred. A substantial number have been—and will continue to be—integrated into the Regular Army to provide the professional military leaders the Nation requires during the troubled era in which we live.

PERSONNEL actions relating to the career reserve officer comprise an extremely important function of the Department of the Army.

A primary objective of the Army's Long-Range Active Duty Program is increased security to the Reserve officer—security in terms of reason-

CAPTAIN MAX L. MARSHALL, Signal Corps, is Production Editor of ARMY INFORMATION DIGEST.

CATEGORY' PROGRAM

This is the first of a series of articles of interest to the Reserve officer on active duty. Future articles—to be published as they become available—will deal with career planning, assignments, schooling, and Regular Army integration.

able opportunity for advancement and reasonable opportunity to remain on extended active duty until he qualifies for retirement.

Among the personnel actions with which the career reservist is most concerned is renewal of his active duty category commitment. Regardless of the individual's original motive for remaining on active duty, or volunteering for it—be it patriotism, a genuine liking for the Army, a sense of mission and job importance, or personal economic reasons (frequently a combination of all these)—when he comes to consider himself, and is considered by others, as a career reserve officer, he has commited a substantial portion of his life to the military service.

By this time he has a family to care for and children to educate. And though frequently he has acquired skills during his service, readjustment to civil life tends to become increasingly difficult. Moreover, he stands to gain by remaining on active duty since, in recognition of his service, a retirement plan has been provided which contributes toward his security after he completes twenty years of active duty.

Accordingly, the prospect of continued active duty service is a matter of vital interest to every career reserve officer.

What, then, are the major considerations affecting such prospects?

First and most important is the size of the Army. This decision is ultimately derived from the people of the United States who through their elected representatives and chosen officials, and in the light of world events, determine the strength of the armed services necessary to prevent war if possible, or to serve as a base for expansion if war cannot be prevented.

The world situation and the decisions of those who interpret the defense needs of the Nation inevitably result in fluctuations in size of the Armed Forces. In event of a reduction in strength, the Army must comply, and can only act to administer any required reduction as fairly as possible, consistent with maintaining the strongest possible posture of military strength.

If the decision involves a large reduction in strength—as has happened in the past—a large number of reserve officers may be relieved from active duty. If the decision involves a relatively small reduction, the cut may be absorbed by normal attrition and by other means less drastic than a general reduc-

tion-in-force (RIF). Existing policy provides that this will be utilized only as a last resort.

Personnel programs must reflect the concept contained in the Armed Forces Reserve Act of 1952—namely, that members of the Reserve serve on active duty to the extent required to *augment* the Regular Establishment when the latter is insufficient. Such personnel must be released to civilian life when their services are no longer required.

If, as seems likely, the current authorized strength of the Army remains relatively stable in the foreseeable future, no disruptions such as those occurring in former years should recur. However, any realistic officer must realize that strength levels can never be guaranteed; just as any realistic civilian must realize that any firm he works for may be forced to curtail its operations, and that *absolute* job security is an elusive thing.

Relative job security is a different matter, however, and the Army is doing everything within its power to provide the highest degree of security possible, to the majority of reserve officers on active duty.

The most important part of this effort revolves around a new program—popularly referred to as the Career Category Program or the Indefinite Category Program—being implemented to replace the old and uncertain Term Category System.

Under the postwar Term Category System, reserve officers were given the opportunity to re-apply for continuation on active duty every three years. This system is currently being phased out, to be replaced by a new system of extended active duty which obviates the necessity for periodic renewal of active duty commitments.

Those receiving the new career category—and again, all but a small percentage of career reservists will—are to benefit from a greater level of *relative* security than has been possible heretofore. Under the provisions of AR 135–215, 27 May 1955, as amended, such officers may be released only for the following reasons:

1. Voluntary request in accordance with applicable regulations.

2. Failure to meet acceptable standards of efficiency or conduct. Reserve officers who fall below acceptable standards for the Active Army will be designated for release by Department of the Army board action as a result of annual screening of records of performance, as set forth in paragraph 10c, AR 135-215.

3. Promotion passover (failing twice to be selected for temporary or permanent promotion to the grade of captain, major or lieutenant colonel).

4. Selection for release upon qualifying for 20-year retirement under the provisions of Title II, Public Law 810—80th Congress.

5. Forced reductions in Army strength, in which case relief from active duty will be accomplished only by Department of the Army board action based on the individual's overall value to the service.

6. Relief from active duty when under any provision of law or regulation an officer becomes ineligible for retention in the Active Reserve.

In behalf of the minority leaving the service involuntarily, the Department of Defense is actively seeking legislation to provide for readjustment pay.

Even in times of large-scale strength reduction, it should be

noted, the individual officer has a measure of control over his status, in that those officers having the greatest overall value will be retained. Thus until he qualifies for retirement or comes under the overage provisions, performance is a governing factor—and performance is in large measure subject to individual control.

MANY considerations are involved in the implementation of this new program.

The needs of the Service must remain foremost. The term "needs of the Service" considered as an abstraction will provide little comfort to the small minority who are adversely affected. But when considered in the light of its true connotation—to render the Army an optimum instrument for the defense of our institutions, freedoms, homes, and loved ones—it becomes much more meaningful.

Among other things, the needs of the Service dictate that consideration be given to the overall branch and grade structure of the Army in the awarding of career category approvals. This structure is carefully devised so that sufficient officers distributed properly by grade and branch, among them individuals with needed specialty skills, will be available to enable the Army to accomplish its missions.

In those instances where one branch has more officers than the Army needs, or an excess number of officers in any particular grade within a branch, career category approvals tend to become more selective. This is a definite factor in the operation of the program, and an important one.

However, in behalf of an individual desiring to remain on active duty whose category, in part, is being denied because of overstrength in branch, steps may be taken to place him in an understrength branch. If he has some qualifications for duties in the new branch and shows potential, or if he shows potential and has sufficient service time remaining before retirement to make re-training feasible, he will be invited to apply for branch transfer. When the transfer becomes official, he is awarded a career category.

IN ORDER to ensure that the career category is successfully and fairly administered, centralized control is maintained at Department of the Army level where complete records on each individual are available and where uniform policies can best be implemented. Three Department of the Army staff echelons are directly concerned with the program—the Office of the Deputy Chief of Staff for Personnel, Career Management Division of the Adjutant's General's Office, and the career branches of the combat arms and technical and administrative services.

Personnel administering the program are carefully selected from among the best qualified officers in the Army. They are thoroughly familiar with all aspects of the undertaking—the individual circumstances in which a career reserve officer finds himself after a number of years of service, and the needs and requirements of the Army. They are conscientious, hard-working, and fair-minded. An example of the attitude that prevails and the serious consideration given each

application is reflected in this statement by one of the branch action officers, a career reserve officer himself: "I go over each recommended category denial many times—I know how I would feel if it happened to me."

Because requests for career categories are considered on a staggered basis as old term categories expire, the work-load of the respective action officers and boards administering the program is phased over a long period of time. This allows for the *detailed* case study that each applicant's records deserve. Ample time is available; there is no "crash."

No individual's application for career category can be disapproved by the action of a single individual, nor even solely by action of his particular career management branch. Only the Department of the Army Active Duty Board—constituted for this purpose—has this power.

The various career management branches have a key role in that each is required to submit to the Board (in addition to the large number they are authorized to approve outright) a required percentage of applications, together with recommendations for approval or disapproval on each. The percentage finally disapproved varies with the quality of officers considered and the percentage of over- or understrength in the branch.

The Board then passes on each individual based on a study of his records, and though it gives serious consideration to the branch recommendation, it can, and occasionally does, come up with a reversal.

In any event the decision of the Board is final, except in cases involving officers recently *promoted* and those within two years of qualifying for retirement. The former require concurrence by the Office of the Deputy Chief of Staff for Personnel, and the latter approval by the Assistant Secretary of the Army for Manpower and Reserve Forces, before denial is finalized.

In general, the Active Duty Board will arrive at one of the following findings:

1) That the application for career category be approved.

2) That the application be disapproved.

3) That the application be disapproved and that further board action be instituted to deprive the individual of his reserve commission. (This procedure is used in cases where moral turpitude is discovered or where equally compelling reasons indicate that the individual is unfit to hold a reserve commission.)

4) That the application be approved *only* on condition that transfer can be effected to an understrength branch.

THE BOARD'S study of the individual's records is only the last of such undertakings, all made by different individuals and/or boards.

The entire process actually begins when, prior to expiration of his term category, an officer applies for career category. The application goes to the action officer concerned with category approvals in the career management branch of his particular combat arm or technical or administrative service, and evaluation proceedings begin.

The overall methods utilized in each of the career branches are subject to policy supervision from

above to ensure the required degree of uniformity. In some specific details each branch may vary slightly in order to meet its own requirements.

Generally, however, one of two procedures is used. A recommendation based on a study of the individual's records is drawn up either by a special board appointed within the branch, or by the action officer working with his assistants and in conjunction with the chief of the career branch—in effect, an informal board.

The various branches have authority to approve a varying number (generally all but a small percentage) of all applications outright, and officers concerned are immediately tendered a career category.

However, the branches are required to send before the Army Active Duty Board the applications of officers who have little overall value to the Service. These must be accompanied by recommendations for approval or disapproval. The percentage disapproved will vary on the basis of quality of those considered and the percentage of branch over- or understrength. The Board will then take final approval or disapproval action on the basis of the same considerations, but reversing the branches wherever it sees fit to do so.

THE APPLICANT'S records provide the basis for approval or disapproval at each level of examination. In general, the following factors are considered:

Efficiency Reports are among the most important. Not only do they provide the basis of the officer's Overall Efficiency Index (OEI), a useful tool and a factor which receives close consideration, but in time, as numerous reports from different commanders accumulate, they tend to form an accurate picture of the individual's strengths, weaknesses, qualifications, and potential value to the Service. Moreover, the comments describing the officer's character are of extreme value.

The efficiency report indicates whether an officer has, over the long run, been improving or if his service has been deteriorating. It shows whether the officer has been applying himself, or if he has moved in the direction of laziness. It tells whether he can get along with his superiors and subordinates, or if he "rubs people the wrong way." It evidences whether he can act decisively when the situation calls for it, or whether he lacks initiative and force, or requires excessive supervision.

Further, the efficiency report contains an accurate record of the duty assignments an individual has performed and of his skills. Various branches may be lacking highly trained officers possessing certain critical specialties. In such cases, the needs of the Service would operate in their favor, provided they are demonstrably capable of performing acceptably.

The *Overall Efficiency Index,* a derivative of the efficiency report, is another valuable criterion. But it is far from being the life-or-death factor it is sometimes rumored to be. If based on a sufficient number of entries, it may be a valid indicator of the individual's relative worth as compared to all other officers in the same grade. This applies only when the OEI is

considered in the light of the individual's entire 201 file.

Suppose that a single very bad report tended to pull down a man's index disproportionately; special consideration often would be made based on a study of his records. Or suppose—as actually happened in one case—an applicant has an unacceptably low OEI solely on the basis of reports from a single rater, but study of his records brings forth numerous favorable letter reports from a joint headquarters which were written during the OEI period. (The application in question was approved.)

In summary, the OEI is skillfully utilized by personnel familiar with the intricacies of its use, with its capabilities and limitations. It *is* an important factor; but it is *not* all-important.

ALTHOUGH a request for a career category will never be denied solely on the basis of one efficiency report, it almost invariably will be disapproved as a result of a single instance involving moral turpitude. Evidence of misconduct or of conviction by court-martial has a similar effect. The presence of undesirable traits of character or a history of personal indebtedness will seriously jeopardize the applicant's chances for remaining on active duty. Failure at a Service School also is regarded as a very serious matter.

If an individual has been passed over once for promotion but the branch desires to retain the man on active duty, the application is held in abeyance until the individual is either promoted, and his application may then be approved, or he is separated from the Army by being passed over a second time.

The presence of a reprimand in a person's file, particularly more than one, requires careful study to determine what weight it should be accorded in Board deliberations. In this connection, however, action personnel have been instructed that undue consideration should not be given unfavorable information concerning an officer's early career, especially when followed by continuous satisfactory performance of duty. Also, that greatest weight should be given to recent years of service.

Commendations likewise are similarly considered. The person or organization issuing the commendation, the nature of the service for which it was awarded, and other factors all enter in. Since commendations eventually must pass through the career branch of the individual concerned, action personnel within the branch are able to assess the degree of liberality any particular command exercises in issuing them. Hence, a commendation originating at a headquarters which issues a great many does not carry the weight of one coming from an individual or organization known to make awards only rarely for truly outstanding service. Of course, awards and decorations also operate in the individual's behalf.

The age of an individual in relation to the rank he has attained is assessed differently by the various branches. In general, the combat arms place considerably more emphasis on youth and on physical condition than do the technical and administrative services in which duties are of a more sedentary nature. Other factors exist which are weighted according to the par-

ticular needs of the branch. For example, outstanding service in combat would be given heavy weight by the combat arms and would tend to make up for certain deficiencies in other areas of an officer's service.

The relative strength of the branch of service to which an individual belongs, and in some cases his grade in that branch, has a direct bearing on his application. The importance of maintaining a balanced branch and grade structure is indicated by the fact that categories are being denied at a rate of 6 percent overall; however, in the case of badly overstrength branches, denials may run to 25 percent in certain grades.

Branches which require additional officers as well as those in which important overages exist are listed above. Individuals who qualify and have a genuine interest in one of these are encouraged to apply for branch transfer, particularly if they have any experience or background in duties related to those they will be expected to perform in the new branch. Such transfer will definitely work to the mutual advantage of the Army and of the individual.

Branch qualification and schooling are additional matters which receive some consideration. However, due allowance is made for the fact that not everyone—often for reasons beyond the individual's or the Army's control, wartime necessity being one—has had equal opportunity to obtain the assignments which make for a well-rounded career. Therefore review of an individual's application is based almost entirely on the manner in which he has performed the duties assigned to him. These factors, however, assume increasing importance with respect to active duty beyond twenty years.

With regard to schooling, it is advantageous for every serious-minded career reservist either to seek an opportunity to attend ap-

THE FOLLOWING CHART indicates the branches in which important over- or understrengths are expected to continue.* Officers are encouraged to transfer to understrength branches, particularly those who are now in overstrength areas. AR 605–145 applies.

OVERSTRENGTH

Branch	*Grade*
Adjutant General's Corps	Col, Lt Col, Capt
Infantry	Capt
Quartermaster Corps	Col, Lt Col, Maj
Transportation Corps	Lt Col, Maj
Military Police Corps	Capt

UNDERSTRENGTH

Artillery	Lt Col, Maj, Capt
Armor	Capt
Signal Corps	Col, Lt Col, Capt
Corps of Engineers	Lt Col, Capt

*** NOTE: This tabulation does not include Judge Advocate General's Corps, Army Medical Service, Corps of Chaplains, and Women's Army Corps. The above list is based on end Fiscal Year 1957 projections.**

propriate branch courses, or to take advantage of the excellent Army Extension Course Program which is open to all and which parallels the resident instruction given at the various Service schools.

Length of service is another consideration. All other things being equal in the evaluation of marginal cases, the man with the most service stands to receive preference.

FROM THE ABOVE it can be seen that every item of pertinent information in an individual's record receives careful attention when he applies for a career category. It can also be seen that the Career Category Program in its immediate impact has a vitalizing effect upon the Army's officer corps.

But what of its long-range significance?

Two vital benefits accrue:

Individual security. In place of a system which makes for uncertainty for all career reserve officers on a recurring triennial basis, the Career Category Program provides a greater degree of *relative* security for the large majority.

Combat readiness of the Army. In this area of utmost long-range significance, the Career Category Program will contribute towards optimum distribution of officer personnel so that the Army will be better able to accomplish any mission assigned to it, whether in troubled times of peace or war.

Your Date with History

A Calendar of Army Anniversaries

1 May 1946 . . . Volume 1, Number 1 of ARMY INFORMATION DIGEST, monthly magazine of the War Department, published in present format.

5 May 1942 . . . Military District of Washington established.

7 May 1881 . . . Command and General Staff School founded.

8 May 1846 . . . Opening battle of Mexican War at Palo Alto.

1945 . . . VE-day. Germans unconditionally surrendered to Allied nations, in Rheims, France.

9 May 1794 . . . Corps of Artillerists and Engineers organized.

14 May 1812 . . . Ordnance Department founded.

1942 . . . Women's Auxiliary Army Corps (WAAC) founded.

17 May 1886 . . . Act of Congress provided that graduates of the United States Military Academy be commissioned as second lieutenants.

26 May 1917 . . . General John J. Pershing assumes command of American Forces in France.

28 May 1917 . . . First independent American operation in World War I by 1st Division at Cantigny.

30 May 1868 . . . Memorial Day first formally observed, under leadership of the Grand Army of the Republic. First celebration of a day honoring the Union dead probably was that held at Carbondale, Ill., 29 April 1866.

1910 . . . Memorial Day became a national holiday.

Expendable supplies are issued on a business-like basis at the Army's

Self-Service Supply Centers

Lieutenant Colonel Frank J. Walsh

SELF-SERVICE supply centers—a new concept designed to simplify the task of distributing expendable supplies to Army units—are currently being tested in continental United States by the Army Quartermaster Corps.

Oddly enough, the idea was first conceived in the Office of the Deputy Chief of Staff for Logistics as a result of the Army Financial Management plan. Many elements of this plan depend upon supply documents as the source for financial data. Obviously the workload associated with pricing documents can be reduced simply by reducing the number of documents.

The Self-Service Supply Center was first proposed late in 1953. In the fall of 1954 the Deputy Chief of Staff presented it in the form of a staff study to the chiefs of the Technical Services. Based upon their comments, guide-lines were drawn up to test the idea.

By coincidence, the innovation embodied in the new Self-Service Supply Centers at Fort Lee, Virginia, and Fort Lewis, Washington, was independently initiated in United States Army Europe during the summer of 1954. Exploratory studies of a similar Air Force system, made at the direction of Brigadier General Webster Anderson, then USAREUR Quartermaster, indicated that a distribution point for expendable supplies modeled upon the modern super-market would improve service, and fulfill requirements more efficiently and cheaply than existing arrangements.

Adopted on a trial basis in Europe early in 1955, the first such center began operations in Berlin in mid-February, the second in Heidelberg in March 1955. Results soon demonstrated that such a system, unusual as it is, reduces the cost of issuing supplies and actually improves service to the troops.

Stocks in supply rooms were reduced and the total value of supplies issued decreased thirteen per cent. Further, commanders found that they had greater latitude in determining their own supply requirements commensurate with their mission. They were able to get what they wanted when they wanted it.

Following the success of the

LIEUTENANT COLONEL FRANK J. WALSH, Quartermaster Corps, formerly The Quartermaster, Berlin Command, is now on duty with General Supplies Division, Office of the Quartermaster General.

Quartermaster Center in Europe, the Deputy Chief of Staff for Logistics approved a request of The Quartermaster General for authority to establish similar centers in the United States on a test basis. The Fort Lee Expendable Supply Center (opened in November 1955) and the Fort Lewis Center (opened on 1 February 1956) stock items of all the Technical Services.

AS THE name implies, the Center is a self-service store modeled upon the modern super-market or Army commissary. Simplicity is the keynote of its operation. Organized along commercial lines, it has departments of each major group or category of supplies—Office, Housekeeping, Maintenance.

A manager is responsible for overall supervision and operation. He is assisted by department managers, the number depending upon size and volume of transactions in each department.

The department manager determines the quantity of each item to be stocked; he takes action to replenish supplies as needed, and generally insures that a sufficient quantity of each item is on hand to satisfy customer demand. He must also see that each item is marked with the proper price.

Under the new system, no item stock record cards are maintained. Item accountability is dropped by the Technical Service when supplies are issued to the store. Thereafter, accountability is assumed by the store manager on a dollar basis.

A simplified accounting system is used, based on dollar value of receipts, issues, and inventory. All transactions are on a dollar basis.

Prices are those set forth in appropriate Technical Service catalogues. In the case of non-standard items obtained by local purchase or from open-end or call-type contracts, actual cost prices are used.

Instead of adhering to arbitrary limitations as set forth in Tables of Allowances, flexible controls are provided by allocating monetary credits against which each customer unit "purchases" its supplies.

To launch the program, a "Parent Account" is set up for each organization or activity which currently requisitions expendable supplies directly from a Technical Service Supply Officer; and for each Parent Account a monetary credit is established.

Initially, the amount of credit allocated is based upon an analysis of previous issues over a representative period. Thus if supplies issued to an infantry regiment averaged $4,000 per month over a representative period, a similar amount is allocated initially to each infantry regiment on the post.

Credits are cumulative; that is, any unused credit remaining at the end of the month is carried over and added to the next month's allowance. Consequently, the unit commander is not under pressure to hoard supplies for possible future requirements.

Each Center makes available to the Parent Account a specified number of credit identification cards similar to those used by commercial firms or the familiar department store charge-plates. The parent organization may then establish subaccounts for each unit, activity or office for which it exercises supply responsibility.

HOLDERS of identification cards

are free to "shop" for their needed items as frequently as they desire and without any restriction as to the quantity or type of supplies purchased. Under this system, it is no longer necessary for regiments or divisions to consolidate the requirements of subordinate units and to break down and issue the supplies received. The supply sergeant or supply clerk in each company, battery, office or activity obtains the supplies directly from the store whenever and as often as needed.

Battalion, regimental and division Supply Officers are relieved of a great amount of paper work, and many clerical manhours are saved.

Since no "back orders" or "dues-out" are maintained, the store and department managers must maintain close supervision to insure that stocks of items in high demand are replenished in time. For special or out-of-the-ordinary requirements a want-list is maintained, and if demand warrants, the item is added to the stock.

BUT IF no stock-record cards are maintained, how does the manager know when and what to order? Here again the policy of simplicity in operations is applied. Visual checks are made by department managers, with personal judgment largely replacing elaborate record keeping.

As a further aid, a card is placed in each bin on which is entered the date and quantity of each item placed there, and the date and quantity of any additional stock received. Comparison of the card data with actual stock on hand reveals the quantity sold during the interim period. From this information the department manager indicates on the bin tag, the maximum and minimum quantity of the item to be carried in stock.

Excess supplies on hand in a unit may be returned to the store for credit, provided they are in good condition and acceptable for resale to other units.

ENTERING the store, the supply sergeant or authorized soldier shopper shows his credit plate or other authorization to purchase, then picks up a shopping cart of the type usually found in commissaries and super-markets. Signs guide him to the various departments. He selects what he needs, unrestricted by Tables of Allowances, nor is he required to justify the need for any particular item.

At the check-out counter a clerk totals the items by department on an adding machine or cash register. A copy of the sales slip or cash register tape showing total amount purchased, the amount of credit, and the balance remaining to the credit of the customer's account is given to the customer. It is as simple as that.

FROM the administrative standpoint, only three forms are needed to account for supplies received, sold and on inventory. They are a receipts journal, a sales journal, and a customer's ledger.

By means of this streamlined system, the issuance of expendable supplies — heretofore a project which sometimes consumed more clerical manhours in paper work than the actual value of the supplies received—is reduced to a simple, businesslike operation, adaptable to the diversified needs of organizations in the field.

Parachutes must be properly packed when

Shroud Lines Are Life Lines

Captain Frank Whitaker

THE ORDINARY man who has trouble folding a suit to pack a suitcase might well tremble at the prospect of folding a huge canopy of nylon into the proper package to save his own life.

But for every paratrooper who jumps in training or combat, for every package of ammunition or food dropped to a hard-pressed combat unit, there must be a properly packed chute that will function when the ripcord is pulled.

The sight of hundreds of such parachutes floating downward with their lethal load of men and weapons—all accomplished within a few minutes as huge transports thunder overhead and white mushrooms blossom forth high above—is awe inspiring. But most viewers seldom realize that behind this full-blown panoply of war unfolding in the skies, many hours of labor are required to keep the parachutes and the aerial delivery equipment in good condition.

After the jump or the air drop of materiel is made, the chutes must be gathered up, inspected thoroughly, repaired if necessary, and repacked again preparatory to another call for action.

TRAINING men for such airborne operations is a vital mission of the Airborne Department of the Quartermaster School at Fort Lee, Virginia. This training prepares men to rig and prepare ammunition

CAPTAIN FRANK WHITAKER, Quartermaster Corps, is Chief of the Packing Section, Doctrine & Techniques Office, Airborne Department, Quartermaster School, Fort Lee, Virginia. Captain Whitaker is rated as a Master Parachutist with 100 jumps to his credit.

and food for airborne delivery, to pack parachutes used by airborne troops and Army aviators, and to repair and service both parachutes and aerial delivery equipment.

Here procedures and techniques of parachute packing, aerial delivery, and maintenance of parachutes and related equipment are taught in three subcourses that require a total of three months for completion.

In studying parachute packing the student learns, in a subcourse involving 129 hours of instruction, that there are several types of parachutes. He first is taught to inspect and pack the troop-type T–10 parachute assembly. This takes two weeks.

After that comes a week devoted to study of free-type parachutes. Then comes the supreme test—the student must make a jump using a chute that he himself has packed.

THE second subcourse is designed to teach aerial delivery procedures and techniques. And here again the trainee goes through three phases. He first becomes familiar with various types of parachutes that are used in delivery of heavy equipment. Starting with the 36-inch pilot parachute, he works through the layout, inspection and packing of different types of extraction and release parachutes. He learns to pack the 64-foot diameter G–12C and G–12D, and the 100-foot diameter G–11 and G–11A models.

Having mastered all of the intricacies of packing these various type chutes, the trainee proceeds to learn the characteristics of the various types of cargo aircraft in which they are used. Flight rules, safety precautions, where and how to place and fasten loads, how to pack aerial delivery containers, and then how to eject them from the plane, are studied fully here.

Next the individual goes on to learn how to rig very heavy equipment for aerial delivery. This involves use of several types of heavy-drop kits, containing all components necessary to airdrop equipment ranging up to a 2½-ton truck.

In the final subcourse on maintenance, he becomes an expert with the sewing machine; he learns the use of many materials and hand tools as well, and receives a basic knowledge of production control. Parachute inspection and classification, techniques of basic maintenance procedure including ripcords, bridle loops, release assemblies, installation of fasteners and grommets, repair of back packs, parachute canopies and static lines—are all included among other skills and techniques.

BUT that is not all. The budding airborne rigger, now almost ready for graduation, devotes some strenuous hours to advanced maintenance. This includes practice in hand sewing, replacing suspension lines and canopy sections, repair of parachutes and delivery containers.

After mastering all phases of parachute packing, aerial delivery and maintenance, the student is qualified to become an airborne rigger. He leaves the Quartermaster School for his next assignment with an airborne unit, confident in the knowledge that his newly acquired skill will pay off in every critical moment when parachute shroud lines become the life lines of his fellow airborne soldiers.

The Army's 'O

Colonel Fielde P. G

SHORTLY after the First Battle of Bull Run in 1861, President Lincoln was reviewing a brigade of Union troops when General Irvin S. McDowell, the commander, halted in front of the 3d Infantry's regimental colors and said:

"Mr. President, these are the men who saved your Army at Bull Run." He might truthfully have added, "—and your Capital City, too."

General McDowell's tribute to the 3d "Old Guard" Infantry Regiment was inspired by the fact that it furnished five of the eight companies to the Regular Army battalion that halted the Confederate force a scant forty miles from Washington. There should be little doubt that the courageous action of this battalion probably saved the Capital.

Thus in a very real sense, Washington is the natural home of the "Old Guard" Regiment which today proudly represents the United States Army in official ceremonies, acts as the President's Honor Guard, and is an important part of the defense force protecting the Nation's Capital.

The 3d is the Regular Army's oldest active regiment. It was organized in 1784 by a "resolve" of the Continental Congress as the "First American Regiment." Today its regimental colors fly 32 dearly bought battle streamers which are proudly displayed in all official ceremonies in the Nation's Capital.

One of the 3d's important duties is to furnish the guard for the Tomb of the Unknown Soldier at Arlington National Cemetery. Guard details are provided by Company A, made up of men "chosen from the select."

During most of the year these men, all volunteers who wear the Army's ceremonial blue and gold dress uniform, face the close scrutiny of a daily average of four thousand visitors.

Night and day, regardless of weather, the Tomb must be guarded. Throughout the 24-hour tour of duty, each sentry marches post one hour and rests three. Then he is "off" for 48 hours.

Not too onerous a stint, one might say, but Tomb guards do not relax a single instant while on post. After

COLONEL FIELDER P. GREER, Infantry, is Commanding Officer of the 3d Infantry Regiment.

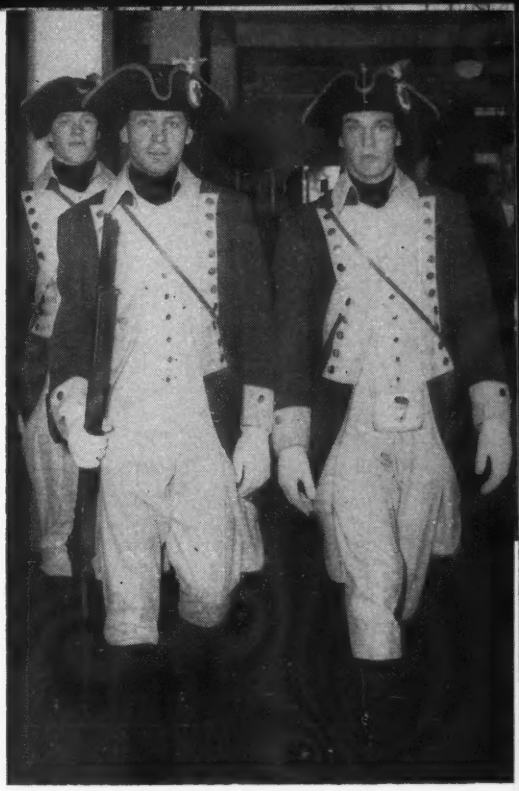
's 'Old Guard'

Fielde P. Greer

saluting the Tomb with the Corporal of the Guard and the soldier he relieves, the sentry takes up his post. He strides from one end of the mat, which marks the limit of the post, to the other at a fast 120-steps-per-minute pace. At the end of the mat he turns, faces Washington and stands for 20 seconds. Again he faces the Tomb, stands another 20 seconds and returns to the other end of his post—always at attention. In marching post, sentries habitually carry their pieces on the shoulder away from the Tomb.

The sentries report that almost all visitors to this national shrine are reverent in attitude. Occasionally, however, a visitor will get in the way of the soldier on post. Usually the slap of the sentry's hand on his rifle stock as he comes to port arms will warn the intruder. If not, a crisp order—"clear my post"—will do the trick.

AN AVERAGE of a dozen military funerals are held daily in Arlington National Cemetery, and Company A furnishes the casket-bearers, honor guard, caisson section, firing-squads, colors, and buglers to render final honors to the service dead to be buried there.



Attired in Continental type uniforms—complete with tricorns, flintlock muskets, cartridge pouches —the color guard prepares to fall in for a parade.

In keeping with old Army tradition, the remains of distinguished personages are frequently transported on a black, horse-drawn artillery caisson. In event the deceased was a cavalryman, or from another mounted arm, his empty boots, reversed in stirrups, are carried by a caparisoned black steed.

For such state funerals, seven horses are used—a "leader" and six greys to draw the caisson. A total of 17 horses are stabled at Fort Myer nearby, to serve the caisson detachment of Company A. Thus, paradoxically, one of the Army's few remaining mounted detachments is in the Infantry.

Under the eye of the Corporal of the Guard, the old guard passes on orders to his relief at the Tomb of the Unknown Soldier.

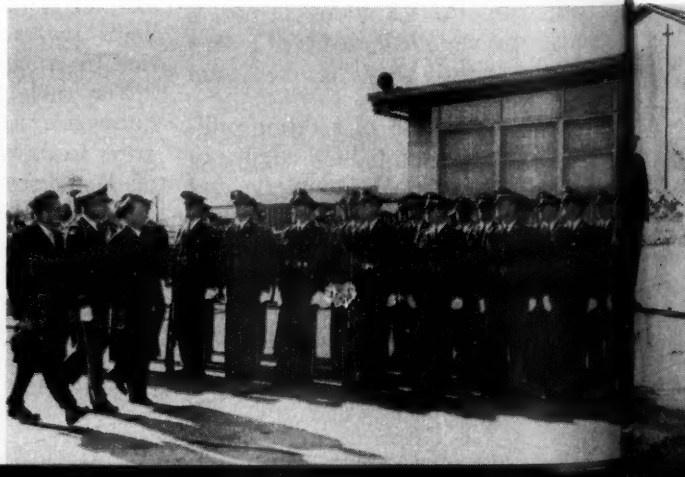
Because of the Nation's greatly increased international responsibilities, a steady stream of important foreign dignitaries visit the Capital each year. National prestige requires that they be met and rendered military honors comparable to those offered by their own crack military units.

Company A, frequently dressed in Army blue, renders the honors. Its schedule is heavy. Last year, for instance, twenty-one full-honor welcoming ceremonies were held at Washington National Airport, while a host of minor events swelled the total considerably.

Company A also acts as the President's personal escort when one is required. On occasions of special significance, such as Inauguration Day, the entire regiment shares this honor. By virtue of the Army's status as the senior service, the regiment leads all joint-service parade columns when combined Armed Forces are represented.

BUT panoply and ceremonials are only one aspect of this unit's tradition.

The muskets of the regiment first spoke in anger in 1794 when they defeated the Indians at the Battle of Fallen Timbers. It was not until 1815, however, that the regiment finally became known as the 3d Infantry. This was accomplished by consolidation of the 1st, 5th, 17th, 19th, and 28th Infantry Regi-



The president of Uruguay, accompanied by Vice President Nixon, troops the line of the Honor Guard as he arrives at Washington, D. C.

Fire! And the last salute to a departed comrade echoes through the trees of Arlington National Cemetery to climax a burial ceremony.

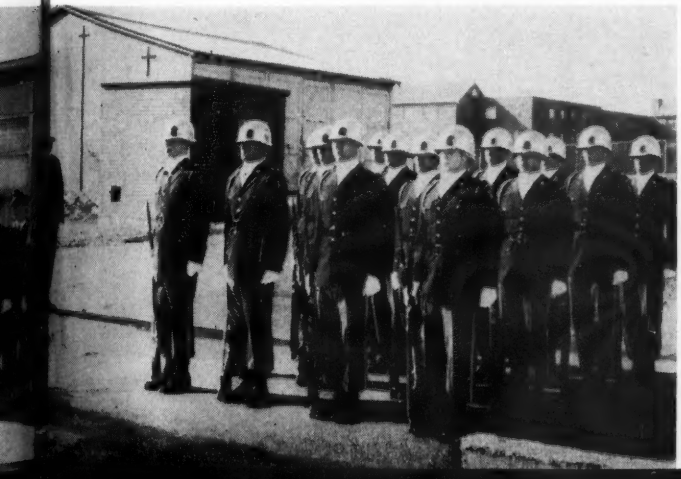
ments, all of whom had played important parts in the War of 1812.

As the Nation expanded westward during the next three decades, the 3d was constantly on frontier duty, protecting the advancing settlers from the Indians. In 1846, it was assigned to the Army of Observation at Corpus Christi, Texas, then under command of Zachary Taylor, once a major in the Third, soon to be President of the United States.

During the war with Mexico, the 3d's bayonets wrote one of the brightest pages of its history. It spearheaded the assault on strategic Fort Monterey and stormed the heavily defended heights of Chapultepec. Its conduct throughout the campaign was characterized by disciplined valor—hallmark of the regiment since its beginning.

FROM Mexico, the 3d went back to frontier duty, battling the Indians along the southwestern border. Early in 1861, however, it became clear that civil war was inevitable, and the regiment was ordered to move by transport to New York, thence to Washington, D. C., for duty with the Union Army.

Five companies of the 3d arrived in time to form the bulk of the Regular Army battalion that covered the retreat of the broken Northern Army at the First Battle of Bull Run, 21 July 1861, and halted the Confederate advance.



In their dress blues and chrome helmets, the 3d Infantry's crack drill team snaps to attention prior to an exhibition at Fort Myer.

The regiment was an active combat unit of the Army of the Potomac and, though reduced in strength to a scant 200 officers and men, it was present at the surrender of General Lee at Appomattox, April 1865.

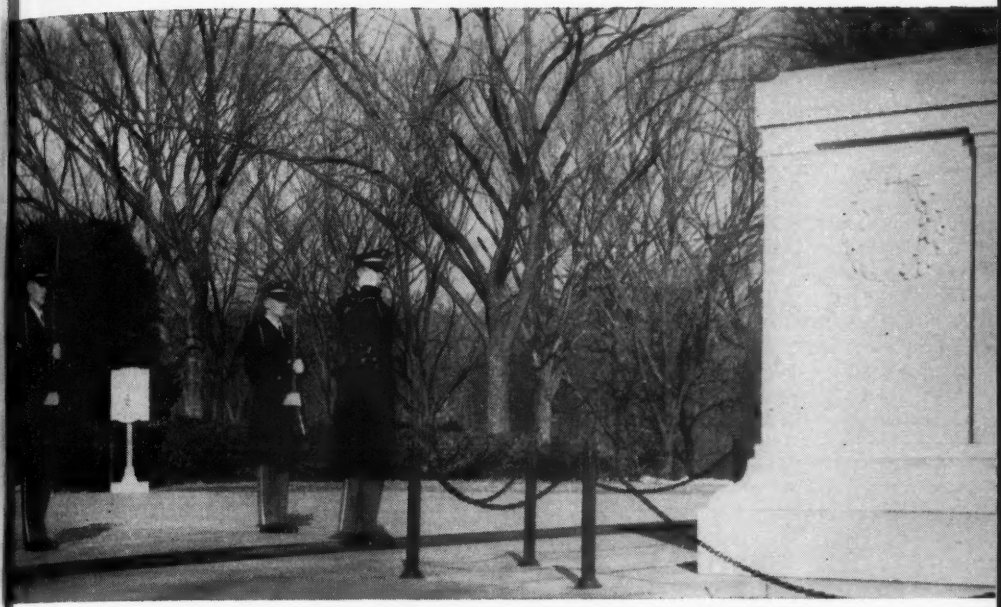
Scarcely had the Civil War ended when the 3d was again dispatched for frontier duty against the Indians in Kansas. Later, it performed similar duty in Montana. In 1888, the regiment was transferred to Fort Snelling, Minnesota, adjacent to the Twin Cities, its home station until the outbreak of the Spanish-American War ten years later. The regiment participated in the Santiago campaign of that conflict, and in 1899 was transferred to the Philippine Islands where it helped to quell the insurrectionary forces.

A few years of tranquil Stateside and Alaskan duty were interrupted in 1909 by a second Philippine Insurrection and the 3d was again sent to the islands for pacification duty. In 1912, the regiment returned to the United States with station at Madison Barracks, Fort Ontario, N. Y., and in 1916 was ordered to the Mexican border. It remained on duty there until 1920.

In 1921, it returned to one of its old stations, Fort Snelling, Minnesota. Throughout the quiet 1920s and 1930s it performed normal peacetime duties. During the period, however, it was distinguished as one of the Army's few units to schedule ski training, a new departure introduced by Colonel (later Brigadier General) James Bjornstadt.

In the summer of 1940, part of the 3d was moved to Newfoundland to protect that strategic outpost. After its return to the States, it served in various posts through-

Basic issue for honor guards includes dress blue overcoat, blue raincoat, tropical worsted summer uniform, dress blues, new greens, and the old colonial buff and blue.



At the changing of the guard ceremony, the old and the new guard, at command of the Corporal of the Guard, salute the Tomb of the Unknown Soldier.

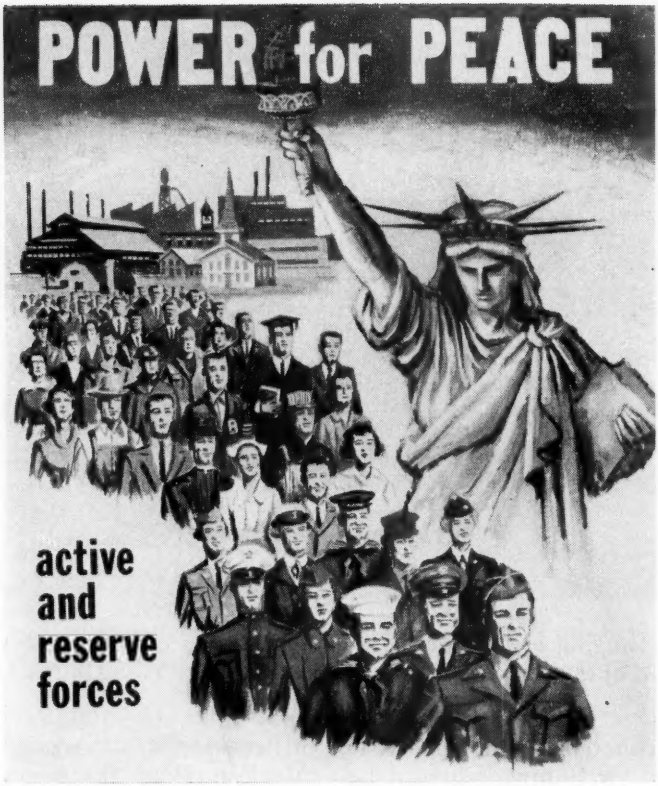
out the country and in March 1945, departed for Europe, where it became part of the 106th Division that had borne the brunt of the Battle of the Bulge in December 1944. Following the German surrender, the regiment was deactivated in November 1946. It returned to duty in Washington two years later.

WHEN visiting Washington, tourists as well as soldiers find it worth their while to observe the 3d "in action." On ceremonial occasions at Fort Myer, which include regularly scheduled Sunday parades, the regiment—wearing the new Army green, shade 44 uniform—stages a glittering pageant as it snaps through the manual of arms, marching and passing in review with shining bayonets.

Because of its service in the Mexican War, the regiment has official permission to parade at all times with fixed bayonets. This movement is executed in response to the old bugle command.

SINCE the regiment has been assigned to Washington, proposals have been made to name it "The President's Own." But the 3d still prefers the sobriquet bestowed when it was accorded the honor of leading the American occupation force into Mexico City in 1846. As the regiment approached the reviewing stand, Lieutenant General Winfield Scott, the Army Commander, turned to his staff and said: "Gentlemen, take off your hats to the 'Old Guard of the Army.'"

That name has stuck to this day.



19 May—Armed Forces Day

Again employing the slogan "Power for Peace" as its keynote, Armed Forces Day will be celebrated 19 May.

Each year since 1950 the Armed Forces have joined in these observances on the third Saturday in May. Wherever feasible the public is invited to visit posts, camps, stations, bases, armories, reserve centers and other facilities of the Nation's defense system. Last year more than 2,500 "open house" programs were staged, parades and reviews conducted by about half a million uniformed personnel, and another 2,000 community programs of varying types were scheduled. In all, Armed Forces Day programs of all sorts had a direct impact upon 20,000,000 visitors and viewers in the United States and abroad.

This year invitations to participate have been extended to organizations and programs supporting the defense effort, including U.S. Savings Bonds, National Blood Program, Civil Defense, Red Cross, United Services Organization, Ground Observer Corps, Civil Air Patrol and Selective Service.

Behind the scenes at the

ARMY PICTORIAL SERVICE DIVISION

Colonel W. W. Lindsay

Part II—Army Film Production Today

Part I of this article appeared in the April *ARMY INFORMATION DIGEST*

AS ORGANIZED today, the Army Pictorial Service Division consists of five key branches organized along functional lines, as follows: Motion Picture Branch, Television Branch, Film Distribution & Utilization Branch, Still Picture Branch, and Planning & Requirements Branch. In addition a Budget & Management Office exists to account for funds.

Motion Picture Branch formulates policy for the production of all Army motion pictures and film strips and exercises staff supervision over this function of the Army Pictorial Center, APSD's major operating arm. It maintains liaison with other agencies on matters pertaining to motion picture production, procurement and depository activities of the Army. Here, too, research planning, operational analysis and evaluation studies of production and teaching techniques are conducted.

Programming is among the most important functions of the Branch. A training film is not born overnight. Many weeks of behind-the-scenes preparation and liaison are necessary before tentative films are even approved for production.

Each year, authorized agencies supervising training activities submit a detailed report of their projected film requirements, together with a statement describing proposed contents, audience aim, doctrine involved, running time and other data. A consolidated list of the requested motion pictures and film strips is then drawn up and forwarded to Headquarters, Continental Army Command (CONARC) where requirements are reviewed, priorities established, and a revised recommended list prepared for the Office of the Deputy Chief of Staff for Military Operations.

In like manner, proposed films

COLONEL W. W. LINDSAY, Signal Corps, is Chief, Army Pictorial Service Division, Office of the Chief Signal Officer.

All aspects of proposed motion picture projects are reviewed by interested agencies before approval is granted and production can begin.

dealing with troop or public information must pass scrutiny by the Chief of Information and Education. Those connected with official history are approved by the Chief of Military History.

Throughout, Motion Picture Branch maintains close liaison with the various agencies concerned—advising, assisting, planning. The budget allocated for pictorial services is the overriding factor. Only so much can be done with the funds available, and these must be apportioned so that maximum benefit is obtained.

It is true that training films provide the most effective means of teaching numerous subjects. It is equally true, however, that they are only partially effective in other areas, and that in still others, alternate means of instruction should be used. In the light of this, many questions arise.

For example, which of the proposed films should be produced? And of these, what form should they take? How many should be shortened and produced as Class "E" films (five minutes in length, covering only one teaching point, and suitable for use in supporting other forms of instruction)? What assistance will be required from the requesting agency in the way of technical advisors, facilities and equipment? How much will the film cost? Should it be produced in color? If so, how much more will that cost? Or is it possible to save money by producing a kinescope recording instead? How much of a saving would be achieved? To what extent would quality or effectiveness be lost?

These, and numerous other answers to technical questions, must be provided to outside agencies. Internally, Motion Picture Branch must finalize the approved program and coordinated details with the Army Pictorial Center to ensure that the finished product is accomplished as economically as possible, and that it satisfies the requesting agency's training need.

Adding to the complexity of the Branch's programming function is the fact that several kinds of motion pictures must be produced. Although training films comprise the

large majority of the total output, the remainder encompasses many forms. Among these are films prepared for such popular and well-known presentations as the "Big Picture" telecasts and "Armed Forces Screen Magazine," as well as a variety of lesser-known but equally important undertakings such as technical films, graphics, classified and special purpose films.

Many of these special purpose films have been of particular importance. First of these—"Two Down and One to Go"—describing the point system to be used in discharging World War II veterans, was valuable in helping to maintain soldier morale following the war. Prepared quietly as the end of hostilities became apparent, hundreds of prints were rushed to all oversea theaters and Stateside installations and shown to millions of soldiers impatient to return to their families. Quickly and almost simultaneously an accurate, easily understandable description of the new point system—so vitally important to each individual—was made available to members of the Army world-wide.

On another occasion, Army film records of the 1955 New England floods following hurricanes Connie and Diane, requested by the President, were invaluable in planning reconstruction and rehabilitation in devastated areas. And along the same lines, top-level Army officials, including a Secretary of the Army and Chief of Staff, have utilized the motion picture medium to reach the Army quickly and effectively on important subjects.

The programming of the quantity and variety of films outlined above, along with the endless liaison and careful coordination involved, comprises the lion's share of the Branch's work-load.

Here each new motion picture is given a good start; from here, staff supervision is maintained to ensure that the end product meets the needs of the requesting agency.

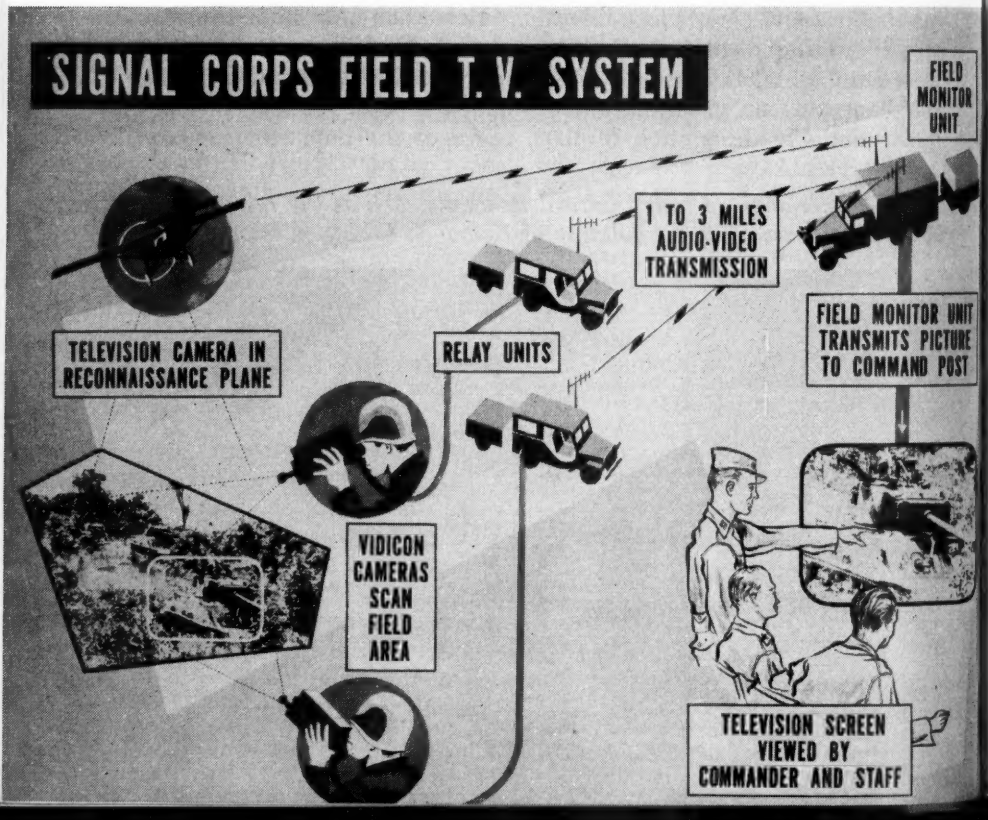
Movie cameramen recorded critical moments such as the rescue of First Army Engineers after the collapse of Remagen bridge in World War II.

Television Branch, newest member of the APSD family, monitors the various tactical, technical, training and educational applications of television within the Army. Besides being responsible for production of television presentations for the Department of the Army and maintaining liaison with other interested agencies, it plans for and conducts investigations of the efficacy of television in combat support, service support, and training roles. Television Branch originates, develops, evaluates and makes recommendations on doctrine and techniques for employment of television within the Army.

Under its guidance, every aspect of television is being explored in the search for ever improved techniques. In Signal Corps studies of the effectiveness of TV as a teaching aid, some 15,000 trainees at the Southeastern Signal School, Camp Gordon, Georgia, received instruction over closed circuit facilities. Analyses by members of the Human Resources Research Office of George Washington University indicated that this method was generally more effective than regular classroom instruction, particularly for lower aptitude individuals.

Television is also showing its versatility as a technical tool for instrumentation purposes and for close-up views of hazardous operations. At Aberdeen Proving Ground, remote cameras aid in the deactiva-

Serving as the commander's roving eyes on the battlefield, hand-carried and airborne television cameras relay images back to headquarters.


SIGNAL CORPS FIELD T. V. SYSTEM
FIELD MONITOR UNIT
1 TO 3 MILES AUDIO-VIDEO TRANSMISSION
TELEVISION CAMERA IN RECONNAISSANCE PLANE
RELAY UNITS
FIELD MONITOR UNIT TRANSMITS PICTURE TO COMMAND POST
VIDICON CAMERAS SCAN FIELD AREA
TELEVISION SCREEN VIEWED BY COMMANDER AND STAFF

The microwave transmitter atop this mobile television van can relay pictures from the battlefield up to 20 miles.

tion of defective ammunition. At White Sands Proving Ground, the reactions within climatic control chambers and at missile impact areas are scrutinized by means of television. And at Walter Reed Army Hospital, Signal Corps color cameras bring close-ups of delicate surgical operations to medical officers, technicians and other specialists on the staff or in training.

But it is in its battlefield application that TV shows greatest promise. (See "Television as an Aid to the Commander," June 1954 DIGEST.) Present trends point toward the day when TV will be used on the battlefield as an important adjunct to wire and radio. Already well advanced experimentally, tactical TV is being developed as an integrated portion of the Battlefield Surveillance System. Under this system portable ground and airborne equipment is used to relay pictures from the front lines to the commander and his staff where they can be seen and studied, coordinated with other intelligence, and evaluated.

Special tests of TV effectiveness in observation, surveillance, reconnaissance and control are being conducted at the Army Electronics Proving Ground, Fort Huachuca, Arizona. Also engaged in field trials are interim Signal Corps television systems and units which participate in maneuvers and field exercises, stage demonstrations and conduct experiments.

Beginning in spring of 1954 in Exercise Flashburn at Fort Bragg, one of these units for the first time provided TV support to a combat organization. Later that year, in Operation Threshold, tactical TV was publicly demonstrated over a national TV network.

Viewers saw an attacking force swarm ashore at a Fort Meade lakesite to assault a simulated enemy stronghold. Accompanying the "invaders" was a Signal Corps cameraman carrying a TV unit that flashed views of critical actions on the beachhead to regimental headquarters—and the viewing public. Meanwhile, a plane-mounted camera was filling in blind spots inaccessible to observation from the ground.

In the logistical Exercise Raindrop and amphibious exercises Surfboard and Hightide, as well as in the atomic exercise at Desert

Experiments in the effectiveness of television as a teaching aid were conducted in classrooms of the Southeastern Signal School.

Rock—in fact wherever *immediacy* is a requirement—TV has shown its value and versatility. On various occasions, it was used to locate enemy activity as well as target areas such as bivouacs, motor pools and tank parks. Television was used to study road nets in both friendly and enemy areas. It aided in controlling troop dispositions in rear areas, and as a means of traffic control along the Main Supply Route. It also functioned as a combat intelligence transmission device and briefing aid. Recently a tactical TV unit formed part of the reconnaissance and surveillance platoon of SkyCav (an aerial Cavalry-type unit) in Exercise Sagebrush, largest maneuver since World War II.

While the TV image is often thought of as transient and fleeting, it can easily be permanently recorded in the form of a kinescope recording. Essentially, this is a motion picture recording of a live TV presentation taken from the face of a TV picture tube.

In commercial use, TV recordings are usually a by-product of the live presentation, used mainly to circumvent the time differential between the East and West Coasts. The Signal Corps, however, uses kinescoping as an alternate method of film production wherever geographical and other limitations can readily be surmounted. Under current plans, an increasing amount of the Army Pictorial Center's output will take this form.

Unlike motion picture production, television lends itself to being shot in continuous sequence. Because director and cameraman can see on special monitors everything that is happening as it happens, constant control can be maintained over the kinescope recording. This eliminates the time-consuming wait for "rushes" and the expensive editing and splicing required in normal film production.

While it is true that TV recordings bring about some loss in quality, this is often offset by the flexibility, speed and low cost of the medium. Among its future applications, kinescopes present the possibility of quickly and cheaply recording certain types of key lessons

and lectures at various Army schools for instant availability in case of mobilization.

In many respects television's progress towards becoming a vital military communications adjunct parallels that of radio, and even shows promise of surpassing it in some areas.

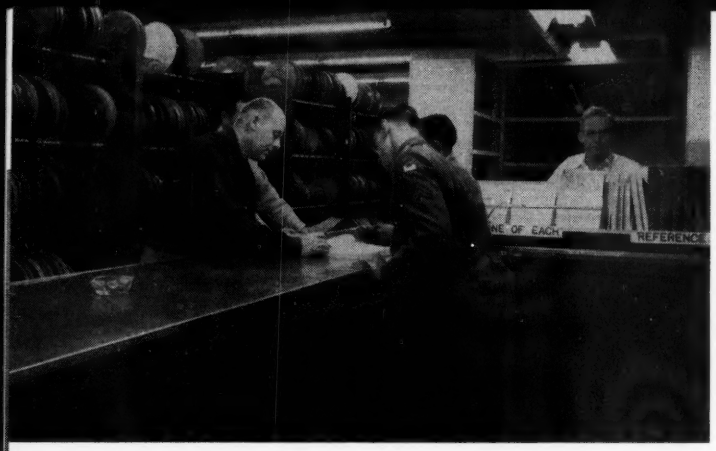
Film Distribution and Utilization Branch. Regardless of the quality and potential usefulness that may be built into a training film, TV kinescope or other visual device, it obviously cannot accomplish its intended purpose unless it both reaches the target audience and is presented effectively. Towards these ends the Film Distribution and Utilization Branch ranges over a wide area—from staff supervision of distribution, exhibition, and evaluation to technical control of Film and Equipment Exchanges all over the world.

Technical control is largely maintained by means of a close working relationship with specialists in the field. Known as Army or Post Directors of Film and Equipment Exchange Services, these specialists are to be found on the staffs of Army and Post Signal Officers. They are prepared to assist the unit commander and his G–3 in integrating training films into local training programs, to advise regarding new or pending visual subjects, and to assist in special problems. Equally important is their function of helping to ensure that training films and graphic aids are properly utilized.

Necessarily much of this effort revolves around training films—the workhorse of the visual training aids group. It is not enough for the instructor to order the classroom lights turned off and the projector turned on. Careful planning and preparation must begin with an analysis of the training need.

Does the subject at hand lend itself to instruction by means of the training film? If so, in all probability one has been carefully tailored to fit the training need. In fact, it is the common responsibility of Signal Corps, CONARC, Office of the Deputy Chief of Staff for Military Operations, and unit

Civilian Directors of Film and Equipment Exchange Services are on the staff of the local Signal Officer.



Appropriate training films to serve varied needs are available at Film and Equipment Exchanges.

commanders alike to ensure that such films are available. All that remains in such a case is to make provisions for delivery of the film for both preview and the actual showing, and where necessary to advise the instructor individually or in a class group concerning the proper techniques for presenting the film.

Sometimes it appears that a motion picture would be highly effective in demonstrating some single aspect of a larger subject area—an area which as a whole may not be well suited to instruction by means of the training film. Here, the Director of Film and Equipment Exchange Services can advise whether an appropriate E film is available.

This new and highly promising category consists of brief (five minutes running time) motion pictures designed to convey a single teaching point—for example "Calibrating and Tuning Radio Set AN/PRC 10." In any case, the Director is in a position to give helpful advice concerning alternate visual aids which may be available, such as transparencies or film strips. He is a valuable aid to all officers responsible for planning or implementing training activities.

The Film and Equipment Exchange System does not issue film or equipment on a permanent basis. Instead, it distributes these *on loan* wherever required through its network of more than 260 Film and Equipment Exchanges. In effect, the network comprises a gigantic, world-wide pool of available training films, projection equipment and other visual and audio aids. Under this system, the amount and variety of equipment and film stocked at each Exchange is determined by the size and needs of the installation or unit being served.

Exhibition records maintained at Film Distribution and Utilization Branch quickly point up situations of extremely heavy demand for prints of certain training films at given installations. Simultaneously, they reveal where copies of the same film are in minimum use. Thus a needed transfer of film or equipment from one area—or even continent—to another is readily accomplished to reflect fluctuating training requirements world-wide.

So effective has the Film and Equipment Exchange System proved in providing for optimum distribution that its services are continually being expanded to include new items of audio-visual equipment. Most recent of these has been the addition of approved Department of the Army transparencies (for VU-graph projec-

tion), and phonograph recordings. These—in conjunction with training films, Class E films, and film strips with which they are related—provide for a well-rounded family of audio-visual aids assembled under one convenient roof where they can best serve to support the Army's training requirements.

THE increased importance of the Army Reserve as a fundamental component of the Nation's military strength has brought forth maximum efforts by the Active Army in support of Reserve training programs. In line with this, plans are being made to provide Reserve units with projection equipment, training films, and other visual aids through the Army's Film and Equipment Exchange System.

In addition, it is planned that a specialist will devote full time advising and otherwise assisting Reserve instructors in improving film presentations as well as classroom application of other audio-visual training aids—a service now provided in the Active Army by Army Directors of Film and Equipment Exchange Services.

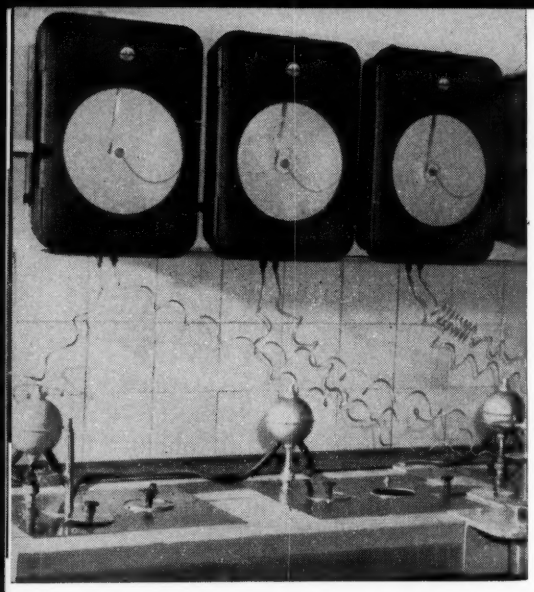
Still Picture Branch formulates policy and develops concepts for the military application of still pictures, and exercises staff supervision over the production, distribution, storage and issue of still pictures for which the Chief Signal Officer is responsible. Of major importance is its function of exercising technical supervision of all Army photographic laboratories world-wide.

Today high-speed film, lenses, flash equipment, infrared films and many other advances in techniques have carried the photographer a long way from Civil War days. Quick, cheap production of fine action pictures now is a commonplace.

Even further, new methods of transmission by wire or radio bring the cameraman much closer in time to the ultimate user. On one occasion pictures made during the Normandy invasion at noon were actually back in Washington at 1100 hours the same day—due to the time differential.

Mobile laboratories of today also are vastly different from the lumbering, horse-drawn, cumbersome equipment of a century ago. Now they are set up to go practically

During fighting in Korea, a combat photographer on the firing line takes a closeup of a 75-mm. recoilless rifle team in action.



Keeping a pictorial record of testing apparatus and results is an important function of still photography.

anywhere, any time. Inside, the lab technician speedily develops the film that has been taken.

But exciting pictures of war action is not the only activity that concerns the Still Picture Branch. Much photo work is more prosaic but every bit as important.

Personnel of this Branch contribute to much of the day-to-day historical activity of the Army. They supervise laboratories concerned with the photographing of developments in research, of equipment tests, or training techniques and hundreds of other activities which may never appear in the newspapers, but which are used in study and research, to the advancement of the Army as a whole.

Pictorial Planning and Requirements Branch has the mission of reviewing, evaluating and making recommendations on Army pictorial doctrine and techniques, particularly as they apply in battlefield surveillance, combat and service support, and public information fields.

The Branch conducts surveys of Army Pictorial Service operations, and prepares estimates, plans and recommendations for organizing and employing pictorial units to meet new or special requirements of the Army. It draws up training and career standards for military and civilian pictorial specialists, and it supervises performance tests and advises on the practicability of new developments. Also, it coordinates the requirements for pictorial coverage of field exercises, maneuvers, and special Department of the Army missions.

THESE separately described agencies and activities of the Army Pictorial Service Division are in practice smoothly meshed and organized to accomplish the Division mission—pictorial support for the Army—by bringing to bear all known methods, techniques and developments of the photographic arts and sciences.

Does the commander require a picture that will penetrate fog and yet be capable of enlargement for detailed photoanalysis? Then the newly developed 100-inch infrared camera of the Signal Corps is called for. Or is speed and immediacy the imperative need? Then the facilities of a mobile television unit may be ordered into play.

Is a large-scale aerial photograph of some key object along the line of contact needed? Then call in Army planes carrying aerial cameras, or call in the RF–71, the radio controlled camera-carrying drone which can take the desired pictures by remote control without risk to

personnel or expensive aircraft.

Whatever the requirement—large, or small, emergency or routine—well-integrated, efficiently organized Army pictorial services are available to answer the commander's every need in the realm of pictorial communications.

SINCE its inception the Army Signal Corps—with its telegraph, telephone and more recently radio and radar—has been synonymous with communications. But pictures, too, in the form of still photographs, motion pictures, film strips, transparencies, kinescopes and live television also comprise a form of communications—a type of vivid imagery which supplements and, on occasion, supplants the written and spoken word.

AS new processes and techniques are developed to enhance the effectiveness of pictorial communications, even more striking developments may be foreseen. By their concerted efforts in all matters of pictorial nature, the various agencies of the Army Pictorial Service Division are paving the way for further advances of utmost significance to the profession of arms.

Photographic Library and Laboratory

THE SIGNAL CORPS Photographic Library and Laboratory (SCPL&L) is a separate Class II activity which works in close cooperation with the Still Picture Branch of APSD. The Library, in conjunction with The Adjutant General's Office, serves as the Department of the Army's office of permanent photographic record. Its files contain almost half a million carefully screened negatives, both classified and unclassified, depicting historical, technical, tactical, and troop and public information topics. These are available to commanders and authorized agencies for official use upon requisition.

Photographs come to the Library from all over the world. Whenever military photographers take pictures, local screening takes place to determine which are of sufficient importance to be retained for the record; these are forwarded to SCPL&L where another, more intensive, screening takes place. Following review, photographs are retained in either the classified or unclassified files, or other appropriate disposition is made.

Once a negative is assigned a number and placed in the Library, it can be retrieved within five minutes from its half-million counterparts by means of an efficient filing and indexing system. But because of the heavy workload, limited staff, and necessary administration involved, it normally requires a week to deliver the finished prints.

THE Photographic Laboratory supports the Library by processing and preparing prints requested by Army and other authorized governmental agencies—an average of 46,000 monthly during the last fiscal year. In addition, a monthly average of 1,300 color transparencies and 850 color prints are also turned out.

Another major mission of the Laboratory is to furnish photographic support to Army headquarters and staff sections located in the Pentagon and in the Military District of Washington. Besides the routine work generally provided to various headquarters in the field, a variety of special photographs, often of national import, must be taken at the Seat of Government. Among these are portraits of military and civilian dignitaries utilized in the Army's public information program. Running into the thousands are the individual pictures that must be taken for officers' identity cards and building passes for Pentagon employees.

In performing its mission, the Signal Corps Photographic Library and Laboratory serves at once as an office of record for the Department of the Army and as the major operating arm of APSD's Still Picture Branch.

Safety and efficiency are built-in features of

Sunny Point Army Terminal

Colonel Raymond L. Hill

A NEW military installation, unique in design, construction and use, has been developed on the North Carolina coast. Known as the Sunny Point Army Terminal, it consists of a vast three-wharf ammunition loading facility serviced by a 70-mile railroad system and channels 34 feet deep leading to the Atlantic Ocean.

Located on the west side of the historic Cape Fear River some 10 miles from the sea, the terminal takes its name from Old Sunny Point Plantation which has existed there since Colonial days.

The facility, built in three years by the Wilmington District of the Corps of Engineers and dedicated last October, will be operated by the Transportation Corps as a unit of the Atlantic Transportation Terminal Command (formerly the New York Port of Embarkation).

Born of congestion at existing ports on the Atlantic Coast, Sunny Point combines modern thinking in design and construction with lessons learned the hard way by makers and handlers of munitions. It is designed for the movement of ammunition from land carriers to cargo vessels with the best protection for personnel and property that man can devise.

Catastrophic explosions in recent wars highlight the folly of loading ships at ports located in heavily populated areas. A type of disaster that could always happen was tragically experienced in World War II at Port Chicago, California, part of the San Francisco Harbor area. There, on 17 July 1944, three and a half million pounds of ammunition in railroad cars on the pier and in the holds of a ship exploded. Result—320 persons dead, 390 others injured, property damage of $13,000,000.

In World War I, two similar disasters occurred. The Black Tom, New York Harbor, explosions of 30 July 1916, killed two persons and caused damages of $40,000,000. At Halifax, Nova Scotia, on 12 June 1917, explosions killed 1,600, injured thousands and caused damages of $50,000,000.

AS A result of these terrifying experiences, military planners developed "quantity-safety-distance" standards which, if followed at all ammunition terminals, would preclude the possibility of such disasters. Under this plan a "safe" terminal would require approximately 20,000 acres, with the civilian population kept outside the ter-

COLONEL RAYMOND L. HILL, Corps of Engineers, is District Engineer, Wilmington District, Corps of Engineers, Wilmington, North Carolina.

Three 2,200-foot wharves, such as this one under construction, make up the ship-loading part of the Terminal facilities.

minal area, beyond the point where they could be endangered.

It was immediately apparent that existing terminals could not be expanded to meet the quantity-safety-distance requirements without entailing the purchase of extremely high-priced land and the displacement of many families. Moreover, such expansions would almost certainly touch off public controversies. Two examples stand out:

Caven Point Terminal, Jersey City, part of New York Harbor area, was the leading ammunition loading terminal of the country in World War II. If expanded to meet quantity-safety-distance requirements, it would extend into the densely populated areas of Jersey City.

Theodore Terminal, Alabama, major loading terminal on the Gulf Coast, lies in an area into which the suburban Mobile population is rapidly extending. Any expansion must take this factor into account.

Accordingly, in October 1950 the Chief of Engineers was instructed to make a study of coastal areas—Atlantic, Gulf, and Pacific—and to select terminal sites that would comply with the various requirements. At the same time, he was instructed to design a modern ammunition loading terminal that would incorporate, as far as possible, all needed safety factors.

THE Sunny Point site was found to satisfy all criteria better than any other location on the Atlantic Coast. Besides fulfilling quantity-safety-distance requirements, it provides deep water, rail and highway service, is relatively free from extremes of weather and climate, and is near sea lanes. Ample land is available at a reasonable price, and minimum population in the area is subject to displacement.

While the Sunny Point terminal is not considered the final answer, safety-wise, in the handling of hazardous material, it is certainly the safest facility of its kind and purpose ever built. Many unusual features are incorporated in its layout and construction.

The reservation, for example,

contains 8,544 acres of land inclosed by a 13.5-mile chainlink fence six feet high. Paralleling the fence is a road for exclusive use of patrol cars. A buffer zone of some 4,326 acres skirts the reservation for added safety. Land and lakes in the buffer zone may be cultivated, hunted and fished, but no one may live there and not over 25 persons may assemble at any one place without prior permission. Such restrictions preclude the encroachment of cities and industry.

AT THE Terminal's Inspection Station, incoming trains slow to three miles per hour while inspectors survey the cars for evidence of hazardous conditions. Any bad-order car is shunted to the "suspect yard" for further examination. In effect, this suspect yard serves as an isolation ward to help prevent a possible explosion, or to keep an explosion from spreading. Shipments by truck receive identical inspection and treatment.

Earthern barricades, ranging up to sixteen feet high and eight feet wide across the top, divide some railroad yards and isolate others to localize any possible explosions. Similar protection is provided for the 500,000-gallon water reservoir and other utilities.

The electrical distribution system is designed to meet all safety requirements peculiar to this type of installation. Each wharf is provided with a substation reducing the distribution voltage to 480 volts for power and to 120 volts for lighting and small apparatus. Electric motors drive the 1,000 gallons-per-minute fire pumps and battery charging equipment for electric trucks. Fire pumps on each wharf may be started from a push-button switch at hose cabinets every 300 feet along the wharf. A stand-by diesel engine insures fire pump operation in emergencies.

Street lights mounted on the landward side extend the length of each wharf. Banks of powerful floodlights mounted on 80-foot steel towers on the channel side augment the lighting of wharves and ships when loading is in progress. Receptacles are also provided for portable floodlights and small apparatus. Street lights—both automatically and manually controlled—line the roads where heavy traffic is anticipated.

In order to conserve weight, cost, and electrical demand, as well as to add a factor of safety, certain apparatus on the wharves are electrically interlocked with the fire pump control so that when the fire pump is started these other operations cease automatically. Further protection of the substation is provided by thermally operated relays that sound an alarm or cut off certain electrical loads when excessive transformer temperatures are reached.

DEDICATED last fall and now operative, the Sunny Point terminal is the first of such installations planned in continental United States. The second, at King's Bay, Georgia, is already under construction under an initial $14 million appropriation.

Present plans call for a third terminal to be located at Potrero Hills, California, in the San Francisco Bay area, and a fourth at Point-aux-Pins, Alabama, near Mobile.

Training Topics

WHAT'S NEW

IN TRAINING LITERATURE, AIDS AND EXTENSION COURSES

Keep your organization current with the latest training materials by referring to this section in each issue.

TRAINING LITERATURE

While the following new literature will be published shortly, units are cautioned *NOT* to requisition copies until receipt of automatic initial distribution or the items are listed in DA Pamphlet 310–3.

Highway Transportation Service in Theaters of Operations. This new field manual (FM 55-31) is designed to provide basic information and doctrine concerning the organization and operation of highway transport units. It also describes highway transport operations, planning, coordination, and support in a theater of operations.

Driver Selection, Training, and Supervision, Full-Track Vehicles. A revision of TM 21–301, 18 Oct. 1944, this manual outlines a system for the selection, training, and qualification of full-track vehicle operators.

Changes. Changes to the following manuals have been approved for publication:

FM 5–36, Route Reconnaissance and Classification—Changes 1

FM 6–20, Artillery Tactics and Techniques—Changes 1

TRAINING AIDS

Training Films recently approved for distribution:

Technique of Machine Gun Fire—Part VII—Position Defilade (40 minutes). Outlines proper technique for delivering machine gun fire from position defilade. Explains types of position defilade; elements common to all methods for engaging targets; computed quadrant elevation method and aiming point method for engaging targets.

Reinforced Tank Battalion, Planning and Conduct of Delaying Action (22 minutes). Depicts a combat situation in which the battalion is called upon to participate in a delaying action to cover a withdrawal. Covers assignment of missions, battalion briefing, reconnaissance, execution of plan by Teams A, B, C and D, security patrol action, and the like.

Training Device:

Stereo Rangefinder Trainer (16–D–C) developed through the Army Participation Group at Special Devices Center, replaces the tank-mounted or stand-mounted operational rangefinder in selecting and training individual military personnel in stereo vision and rangefinder operation. It gives tank crewmen classroom practice in ranging on typical tank targets under varying conditions of visibility. It consists of a stereoscope which views a pair of reticles, and five stereo photo views of natural terrain targets. All the controls on the M12 rangefinder are duplicated except the boresight adjustment. Initial automatic distribution through training aids subcenters will be completed by July 1956.

Graphic Training Aids:

Index of Graphic Training Aids and Devices. A new Department of the Army Pamphlet (310–5) will provide information to instructors at all levels on training aids and equipment available to support Army instruction. The pamphlet lists approved GTA's, transparencies, and devices to include illustrations of training equipment available through Training Aids Subcenters.

ARMY EXTENSION COURSES

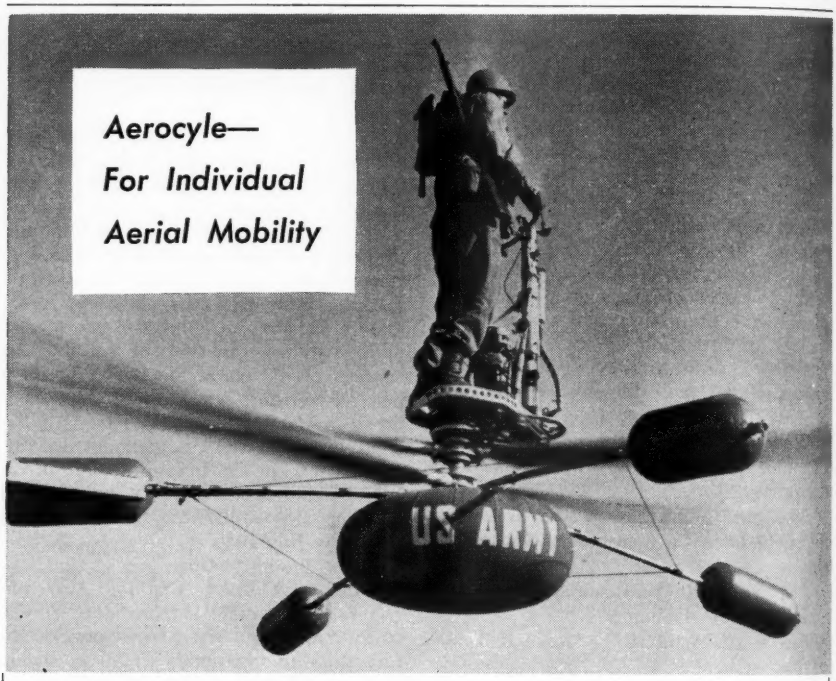
The following new subcourses have been approved for publication and administration in the Army Extension Course Program:

G1 Functions and Techniques—II and G5 Functions and Techniques, Subcourse No. 5. Command and General Staff College. Covers the fundamentals, procedures, and techniques employed by the division G1 on matters concerning per-

sonnel casualties, and rotation; the purpose and techniques of preparation of the personnel estimate, periodic personnel report, and appropriate portions of the administrative order; the fundamentals, procedures, and techniques employed by the G5 in assisting the commander in matters pertaining to civil affairs and military government; the objectives, policies, procedures, and organization for military government, and the administration of civilian populations.

G3 Functions and Techniques—II, Sub-course No. 8. Command and General Staff College. An introduction to the organization, functions, and responsibilities of G3 and the G3 Section in the various types of divisions and at various levels of command.

Corps in River Crossing and Mobile Defense Operations, Subcourse 31. Command and General Staff College. The fundamentals and techniques employed by a corps in a deliberate river crossing.

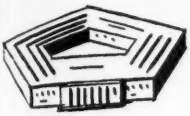


EXPERIMENTAL tactical testing of a helicopter-type individual lifting device, known as the Aerocycle, may result in improved battlefield mobility for the combat infantryman.

Initial tests of the new machine conducted at Camp Kilmer, N. J., showed that men with no previous flying experience could learn to operate the machine proficiently with only 20 minutes of instruction.

Powered by a two-cycle Mercury outboard motor with a rating of 44 horsepower, the Aerocycle weighs about 200 pounds, carries a payload of some 300 pounds, and can fly at an estimated maximum speed of 65 miles per hour with a range of approximately 150 miles.

TO OPERATE IT, the soldier stands on a platform over the rotor blades. He guides the machine by leaning in the direction in which he wishes to travel. A control mechanism governs vertical motion and speed, with hand levers somewhat similar to the arrangement on a motorcycle. Developed by DeLackner Helicopter, Inc., of Mount Vernon, N. Y., the machine also is equipped to land on water.



PARAGRAPHS

from

The Pentagon and the Field

A new hot weather Army uniform consisting of khaki shorts, knee-length stockings and short-sleeved, open-neck shirt, will be issued this summer. Two of the abbreviated uniforms will be included in initial clothing allowances. Area commanders will prescribe conditions under which the hot weather uniform may be worn.

The Army also has adopted a new general wear raincoat of light nylon, coated on the inside with polyvinyl-butyral. It is taupe shade, double breasted, with belt and shoulder loops. The new raincoat will be issued after stocks of the present type are exhausted.

Inventory control and accounting for 20,000 Army Quartermaster supply items —food, clothing, equipage, furniture and office supplies—stored in 12 depots throughout the United States is being consolidated in the Inventory Control Center at the Richmond, Virginia, Quartermaster Depot. The move will reduce Quartermaster stock accounting centers from seven to three—at Columbus, Philadelphia and Richmond Depots. Stock accounting centers at Atlanta, Utah, Schenectady, and Fort Worth Depots will be eliminated. The consolidation is expected to produce an estimated recurring savings of more than $450,000 annually.

A newly created missile development activity at Redstone Arsenal, Huntsville, Alabama, is to be known as the Army Ballistic Missiles Agency (ABMA). The new command is separate and distinct from Redstone Arsenal, development center of the Army's big missiles. Both the Army Ballistic Missiles Agency, commanded by Maj. Gen. John B. Medaris, and Redstone Arsenal, commanded by Brig. Gen. Holger N. Toftoy, are responsible directly to the Chief of Ordnance.

Under a recent change to AR 614–30, restrictions fixed by prior foreign tours have been eased for top-four-graders desiring to volunteer for duty in the Far East. Enlisted men in grades E–4, E–5, E–6 and E–7 now may request assignment in the Far East Command at any time regardless of the area of their previous overseas service. Such requests must be made in writing through channels.

The Army will use a "new" means of selecting Army and Air Force Regulars and Reservists for appointment to the United States Military Academy this year —the interview board. The new selection system is designed to predict academic ability, leadership potential, motivation for a military career, and character traits.

Applications will be accepted through 31 May. Those who rank highest in each component will be appointed about 1 August and the qualifying Regulars will be sent to the Army Preparatory School in anticipation of the March 1957 West Point entrance examinations.

Dehydrated fish sticks for use in military rations are under development by the Army Quartermaster Corps. The experimental product conserves shipping weight, needs no refrigeration, and can be prepared for serving in five minutes.

Effective last February, National Guard personnel volunteering for six months active duty for training under provisions of the Reserve Forces Act of 1955 will serve henceforth in Federal status. Previously National Guardsmen in the program remained under State control and were not subject to the Uniform Code of Military Justice.

The Robert P. Patterson Memorial Award, given annually to the leading graduate of the Infantry Officer Candidate School at Fort Benning, Georgia, was presented by Secretary of the Army Wilber M. Brucker to Second Lieutenant John J. C. Herndon, Jr., of New York.

Fifteen of the approximately 60 male athletes who made up the 1956 United States Winter Olympic Team were Army members. Six of the 17 individuals on the Ice Hockey Team were selected while in Army service.

Army research psychologists have developed two prototype language tests which will become the basis for radical revision of all Army language tests. These prototypes were developed after extensive field testing on one European language in EUCOM and on one Asiatic language in FECOM. The Army Language School will use these prototypes in revising tests in over forty languages.

Dates and sites for both the 1956 All-Army Championships and the Interservice Sports Championships are announced in Department of the Army Circular 28–24.

Events scheduled in the All-Army contests are:

Triathlon and track and field, 4–6 June, Fort MacArthur, Cal.; swimming and diving, 26–28 July, Fort MacArthur; golf and tennis, 12–18 August, Fort Bragg, N. C.; baseball, 16–22 September, Fort Dix, N. J.; boxing, 1–6 October, Fort Myer, Va.

In the Interservice Sports Championships, dates, sites and host services are:

Triathlon and track and field, 14–16 June, Fort MacArthur, Army; swimming and diving, 7–9 August, San Diego Naval Training Center, Cal., Navy; tennis, 20–25 August, Army-Navy Club, Washington, D C., Air Force; golf, 27–31 August, Eglin Air Force Base, Fla., Air Force; boxing, 10–11 October, Camp Lejeune, N. C., Marine Corps.

Basketball and bowling contests were conducted in March.

Official Notes

TRANSPORTATION REQUESTS. AR–55–53 prescribe the new standard form of Transportation Request for use by the Department of the Army, and sets forth its uses.

MILITARY POLICE ACTIVITIES. AR 616–36 establish policy to insure maximum economy in the utilization of Military Police personnel.

MOTION PICTURE SERVICES. AR 15–110 set forth the composition of the Board of Directors, Army and Air Force Exchange and Motion Picture Services, which was established in January as a permanent Army and Air Force Board.

CIVIL AFFAIRS/MILITARY GOVERNMENT BRANCH. AR 140–108 prescribe selection and assignment criteria for members of the Civil Affairs Military Government Reserve units, setting forth minimum individual prerequisites and qualifications, selection procedures, security clearance requirements, retention criteria, and disposition action for those who cease to meet retention criteria.

MILITARY INTELLIGENCE AND ARMY SECURITY BRANCHES. AR 140–192 set forth organization, training, assignment, and retention criteria for Army Reserve personnel in Military Intelligence Service Organization, Strategic Intelligence Research and Analysis units, Counter Intelligence Corps, Armed Forces Censorship (Army), and Army Security units.

ARMY TRANSPORT AVIATION. Training Circular 1–7 provides basic guidance for development of doctrine, tactics, and technique relating to the employment of Army transport aviation; and also provides information for commanders and staff officers in the use of such units.

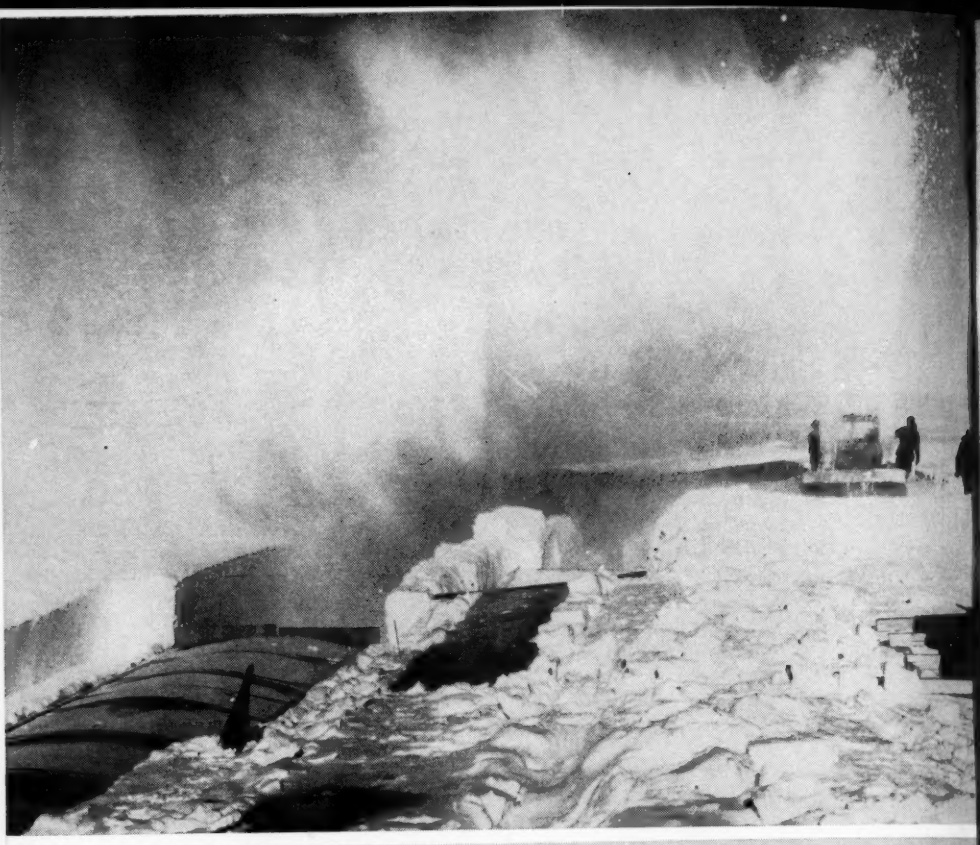
Engineer Research on Greenland Icecap

SEEKING TO determine the most effective ways of working, building and living at the top of the world, the Engineer Arctic Task Force again will be at work this summer on the Greenland Icecap.

Extensive trials have been made in the past few years by the Corps of Engineers to develop knowledge and techniques which will enable construction of airfields, roads, warehouses and other facilities on or beneath the snow surface. Trials have proved the feasibility of various structures and now efforts will be made to perfect them.

Getting onto the Cap in the first place is difficult because of the large area of treacherous crevasses that surrounds it. Last summer engineers experimented with tunnel borings that would enter the snowy cliff at ground level, travel through the snow pack, then emerge on top of the Icecap.

EXPERIMENTS also were carried out in building airstrips of compacted snow to establish air operational capability. Using various methods and equipment, a snow compacted airstrip was built and successfully tested by the largest cargo carrying wheeled planes of the U. S. Air Force.

Still other experiments were conducted in construction of large trenches on the surface of the snow areas. The tops of these trenches were roofed over, then covered with snow, thus creating a protected tunnel passageway. In some of the trenches, roofs were made of arched plywood. In others, experiments were conducted with wire and polyethylene laid on wire ropes to provide covering for sub-surface roadways.

(*For pictures of Arctic trench operations, see back cover.*)